Volume 164 No. 19

Oil, Paint and Drug Reporter

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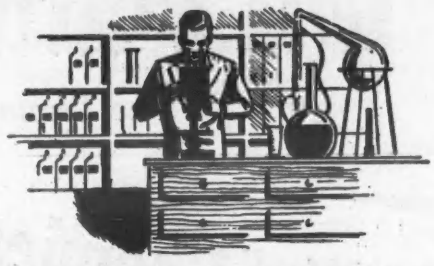

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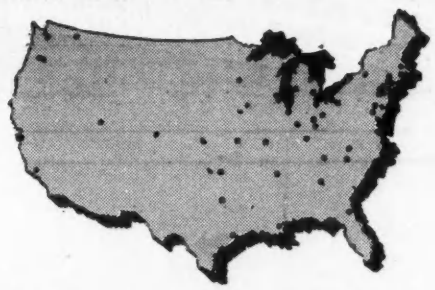

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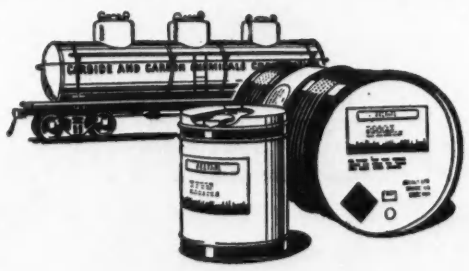

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Oil, Paint and Drug Reporter

Volume 164 No. 19 — 30 Church Street, New York 7, N. Y. — November 9, 1953

Lead, Zinc Tariff Rise Of 50 Percent Sought

Charging that an emergency confronts the domestic lead and zinc industry, caused by a flood of imports, the National Lead and Zinc Committee last week urged the Tariff Commission to recommend to the President that the import duties on these two metals, including pigments, oxides and concentrates, be increased by 50 percent over the level that existed on January 1, 1945. In most cases this would raise the rates above the levels of the 1930 tariff act.

The commission is now investigating imports of lead and zinc at the request of the ways and means committee of the house and the finance committee of the senate and, as a result of a petition filed by the National Lead and Zinc Committee for relief under the escape clause of the trade agreements act, duties on the metals have been reduced in trade agreements with several countries under the general agreement on tariffs and trade and under the Torquay agreement.

Industry in 'Desperate Plight'

Otto Herris, chairman of the industry's committee, pictured the domestic industry as in desperate plight because of an influx of foreign metals as an immediate result of the lowering of the duties in 1948 and in 1951. Even the 50 percent increase in duties, which is the maximum that could be granted without further congressional action, would not be sufficient to provide the relief necessary, he said.

Mr. Herris indicated that what the committee is really seeking is an "anti-dumping tax" on imports of lead and zinc to be removed when prices are at a reasonable level. Under questioning, he explained that he was not referring to an "anti-dumping tax" in the legal sense since matters involving dumping and penalties to be applied come within the jurisdiction of the Treasury Department rather than the Tariff Commission.

The tax he had in mind, he continued, would be a sliding scale of taxes that would operate to prevent dumping of foreign metals into this country, but not bar the entry of imports that are needed to supplement domestic production. Such a scheme has been proposed in congress, he

—*Continued on page 91*

CCC Products for Sale Listed by Agriculture Dept.

Commodities available for sale from the stocks of the Commodity Credit Corporation during the month of November include nonfat dry milk solids, raw linseed oil, crude and refined cottonseed oil, cottonseed meal, olive oil, peanuts, flaxseed, and soybeans it was announced November 2 by the Department of Agriculture. Soybeans are newly added to the monthly list.

Prices being asked by the agency are unchanged from those of October, and in the case of raw linseed oil, it was announced that the price will not be reduced during the period ending May 31, 1954. Cottonseed meal will continue to be offered at the market price as determined by CCC, but with the new condition that the price is not less than $54.50 per short ton Valley basis with differentials for quality by area.

As was the case during October the following products will be sold for export at prices differing from those applying to the domestic trade:—Crude and refined cottonseed oil, raw linseed oil, olive oil, and peanuts. Soybeans will be offered to the domestic and export trade for crushing oil at the market price.

Insecticide Bids Invited

Bids have been invited by the General Services Administration for supplying various quantities of insecticide products for shipment of India under requisition No. TCA-428-131-3-46(S2). The bids will be opened November 12 and suppliers are asked to quote on the following:—1,000 gallons of aldrin, 40 percent concentrated emulsion; 5,000 pounds of 25 percent aldrin dust; 1,430 gallons of lindane; 10,000 pounds of 25 percent wettable lindane powder; 225 gallons of heptachlor; 2,000 pounds of 25 percent heptachlor dust.

Fluorspar Investigation On Imports Under Way

The Tariff Commission has instituted an investigation of imports of fluorspar to determine whether the concessions granted on this product in the General Agreement on Tariffs and Trade threaten serious injury to the domestic industry.

The investigation was requested by the Ozark-Mahoning Company, Tulsa, Okla., and is directed at fluorspar containing more than 97 percent of calcium fluoride which has been reduced in duty to $2.10 a ton. Under the tariff act of 1930, this material carried a duty of $5.60 a ton. It was cut to $2.10 a ton under the Torquay amendments to GATT.

Hoover Commission Names 15 to Medical Task Force

A task force to investigate the efficiency of the medical services of the federal government, consisting of fifteen members, was appointed last week by chairman Herbert Hoover of the Commission on Organization of the Executive Branch of the Government. Two additional appointments will be made later.

Mr. Hoover explained that the purpose of the task force is to determine and evaluate the facts and experience of the federal government in medical work and submit to the commission its recommendations as to improved efficiency, economy, elimination of overlaps, and reduction in expenditures. There are seven departments of the government conducting medical services.

The medical services task force embraces four members who served on a similar investigating group during the work of the old Hoover Commission of 1947-50. Chauncey McCormick of Chicago was appointed chairman of the group. Other members are:—

Dr. Francis J. Braceland, Chicago; Dr. Edward D. Churchill, of Massachusetts General Hospital; Dr. Edwin L. Crosby,

—*Continued on page 60*

Fatty Acid Production Reported Lower in Sept.

Fatty acid production in September totaled 31,133,000 pounds, a decrease of some 9 percent below the August level of 34,116,000 pounds, according to figures released by the Association of American Soap and Glycerine Producers. September output was slightly higher than production in the comparable month in 1952.

Total disposition in September was 32,110,000 pounds, or approximately 1,000,000 below the August figure. It was, however, above the September, 1952, level. Stocks, including work in process, were largely unchanged at 40,996,000 pounds.

Tax Aid Policy Revised In Favor of Certain Sites

The Office of Defense Mobilization last week modified its policies on the issuance of tax amortization certificates for new defense plants and on the awarding of defense contracts in an effort to encourage the building or expansion of defense plants in areas with high levels of unemployment. It was announced November 5 by Arthur S. Fleming, director of ODM, that accelerated amortization of new facilities will be allowed up to 100 percent of the cost in some instances, depending upon conditions surrounding each individual case. He listed seventeen large and twenty-two smaller areas where the new policy will apply.

The present policy of allowing certain percentages of new capital costs to be written off for tax purposes at an accelerated rate remains unchanged except for the additional incentive for construction in the specified areas. The agency will first determine the usual percentage of certification of capital investment applicable to the type of facilities involved and allow an additional percentage of certification of capital investment if the facilities are to be established in labor-surplus areas certified by the Secretary of Labor.

With respect to the policy on awarding defense contracts, it was proposed at one time that firms in labor surplus areas be issued contracts upon matching the bids

—*Continued on page 90*

Antibiotics Certification Rule Announcement Made by FDA

Shippers of antibiotics in bulk for repackaging will continue to be responsible for certification of each repackaged batch of the drug or other preparation made from the drug under an order of the Food and Drug Administration made public last week.

In a notice to manufacturers signed by Nelson A. Rockefeller, acting Secretary of the Department of Health, Education and Welfare, the agency's policy on this matter was set forth as follows:—

"The Food and Drug Administration has received inquiries from certain interested manufacturers concerning their shipment of certified antibiotics, packaged in bulk containers, to hospitals and pharmacies for repacking or for use in the manufacture of another drug on the order or prescription of a physician.

"The regulations promulgated under

—*Continued on page 60*

Tung Nut, Oil Price Support Levels to Remain Unchanged

The Department of Agriculture last week confirmed earlier-announced Commodity Credit Corporation support prices on 1953 crop tung nuts. The support prices, as fixed last month, are $68.38 per ton, basis 18.5 percent oil content, and 23.9 cents per pound for grower-owned tung oil.

Agriculture Dept. Shift Into Effect As Planned

The proposed reorganization of the Department of Agriculture was put into effect November 1 by Secretary of Agriculture Ezra Taft Benson substantially as provided for in the plan of reorganization announced October 13. The action was taken by the secretary in the face of gathering protests against the plan and a threat of congressional moves next session to repeal the secretary's authority to revamp the department.

Although complete details of the plan are still lacking because many final decisions at the lower working-levels of the department still have not been made, one of the principle results of the plan will be to reorganize the work of the various bureaus of the old Agricultural Research Administration in such a way that the Bureau of Entomology, Bureau of Plant Industry and Soils and the Bureau of Agricultural and Industrial Chemistry will lose their identity as such.

General Outline Detailed

The general outline of the reorganization puts all of the service agencies under four main groups:—(1) Federal-state relations; (2) marketing and foreign agriculture; (3) agricultural stabilization; (4) agricultural credit. It also abolishes the seven regional offices of the Soil Conservation Service, strengthens the state soil conservation offices, and also abolishes the Bureau of Agricultural Economics and the Production and Marketing Administration.

Vigorous protests have been made to the Secretary and to congress against the changes in the soil conservation service, but Mr. Benson denied that any effort was being made to scuttle this service. He said that the SCS will continue as a separate agency of the department and will be given greater responsibility at the state level for program formulation and execution.

With primary emphasis being placed upon making the Department of Agriculture a better "service" institution, the Agricultural Research Administration has now become the Agricultural Research Service, with an assistant administrator for the office of experiment stations, an assistant administrator for management, a deputy administrator for research and a deputy administrator for regulatory work.

Deputy Administrator's Duties

The deputy Administrator for Research will have supervision over research on crop and animal production, diseases and insect pests, farm and land management, human nutrition and home economics, and utilization of agricultural products. This is composed of the research now conducted in the Agricultural Research Administration (except research on forest diseases and pests, and marketing research) together with research from other agencies.

Crop and animal disease and insect control, eradication, regulatory and inspection activities now conducted in the Agricultural Research Administration (except forest disease and pest control work), together with poultry, meat inspection and administration of the insecticide act, which was under the Production and Marketing Administration, now fall under the supervision of the deputy administrator for regulatory work.

One of the major changes which industry representatives may encounter in

—*Continued on page 45*

Minerals Exploration Program Cut

A cutback in the government's minerals exploration program to those minerals which are still in short supply for defense needs was announced November 3 by the Defense Minerals Exploration Administration in amendment 3 to DMEA order 1. The amendment also reduced the maximum percentage of the government's participation in the approved costs of any exploration project from 90 percent to 75 percent.

The amendment carries out the recommendations made by the Office of Defense Mobilization on August 31, when that agency approved the Department of the Interior's request for additional borrowing authority to finance the exploration program through June 30, 1954. Government assistance is now available for the following metals and minerals:—

Metals Receiving Govt. Aid

Group A (for which the government will contribute 50 percent of the approved project costs)—Chromium, copper and molybdenum.

Group B (for which the government will contribute 75 percent of approved costs)—Asbestos (chrysotile only), beryl, cobalt, columbium, manganese, mica (muscovite block and film only), nickel, platinum, tantalum, tungsten and uranium.

Secretary McKay said the practical effect of the revision of the minerals exploration program may be summarized as (1) the elimination of crocidolite and amosite types of asbestos, refractory grade bauxite, industrial diamonds and thorium from the list of minerals previously eligible for government assistance, and (2) the shifting of all remaining commodities heretofore eligible for 90 percent government participation into the 75 percent category, which group previously included only manganese and tungsten.

November 3 Transition Date

The secretary also pointed out that all applications of record on the date of publication of amendment 3 to DMEA Order 1 will be processed in accordance with the criteria previously in effect, and that the reduction in the percentage of government participation for all metals and minerals listed under group B above

—*Continued on page 90*

Coumarin Use Ban Sought In Various Chocolate Items

The Food and Drug Administration last week issued a proposed amendment to its definitions and standards of identify for cacao products to prohibit the use of coumarin in the preparation of various chocolate products. The action was taken on the basis of evidence that coumarin has toxic properties that might prove deleterious to health.

Coumarin was specifically included among the optional artificial flavoring ingredients of chocolate products in the standards of identify promulgated in 1940, but when research in recent years disclosed the potential health hazards of the product, the FDA moved immediately to bar its use in foods. The present action is subject to protest of interested persons until December 2.

Soybean Oil Export Drop Is Seen Offset

Increased demand for soybean oil in the manufacture of margarine during 1953 should more than offset the down turn in exports of soybean oil, George M. Strayer, secretary of the American Soybean Association stated last week.

Although shipments abroad of crude and refined soybean oil for the seven months through July were off over 100,000,000 pounds, or approximately one-fifth of the total for the comparable period last year, soybean oil has been moving to margarine producers this year at a rate 22 percent above 1952, Mr. Strayer said. With the expected upturn in margarine production in the final quarter of 1953, the resultant greater usage of soybean oil in margarine should more than compensate for the drop in exports. Strayer quoted figures just released by the international commodities branch of the Department of Agriculture and the Census bureau, which revealed that so far this year consumption of soybean oil used in margarine was running 85,000,000 pounds ahead of the total for the first eight months of 1952.

August Use Up 35 Percent

Use of soybean oil in margarine during August was 35 percent above the comparable month last year, Mr. Strayer reported, and nearly 4,000,000 pounds over the July total.

During the first eight months of this year 474,230,000 pounds of refined and hydrogenated soybean oil have gone into the production of margarine. S. F. Riepma, president of the National Association of Margarine Manufacturers, recently predicted that the margarine industry would require about 75,000,000 more pounds of soybean oil this year than were used in 1952.

"There are several indications that foreign requirements for soybean oil may rise in 1954," the soybean industry spokesman said. "In the light of a lack of expansion in world supplies of edible vege-

—Continued on page 83

Selenium Export Quotas Set For Fourth, First Quarters

Selenium export quotas for the fourth quarter of 1953 and the first quarter of 1954 have been set at 6,000 pounds, selenium content, for each quarter, the Bureau of Foreign Commerce announced November 5. The same quantity was allotted for export in the second and third quarters of 1953.

The new quotas include selenium powder (schedule B No. 619159), metal (B No. 664998), salts of organic compounds (B No. 839750), salts and compounds, including selenium dioxide (B No. 839900), and selenium-containing pigments (B No. 8242900). Not more than 300 pounds of each quarter's quota may be licensed in high-purity grade selenium, BFC stated.

The filing period for first-quarter 1954 license applications covering selenium powder and selenium metal is November 30 to December 14, and for selenium salts and selenium-containing pigments, December 16 to 31.

Nat'l Lead Co. of Ohio Posts to Alex Stewart

Alex Stewart has been named vice-president, director and general manager of National Lead Company of Ohio, contract-operator of the Atomic Energy Commission plant in Fernald, Ohio. He continues as director of research for National Lead Company.

The Fernald plant includes a uranium ore refinery and other facilities for the production of uranium in forms suitable for use at the AEC's fissionable materials plant. Construction of the plant is now nearly complete and 1,600 employees are presently at work there.

Pacific Coast Borax Mails '54 Contracts; Prices Hold

Pacific Coast Borax Company, a division of Borax Consolidated, Ltd., New York, announced last week that it has begun mailing out 1954 contracts for borax and boric acid. Prices in the new contracts are at current market levels. In announcing the action, a company spokesman pointed out that present business conditions do not permit price rises, while the continuing high cost of production makes any reductions impractical.

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Nopco Purchases Control Of Yocum Faust of Canada

Thomas A. Printon, president of Nopco Chemical Company, Harrison, N. J., has announced the purchase of the controlling interest of Yocum Faust, Ltd., of London, Ontario, Canad... The subsidiary company will continue to operate under its original name.

This addition, it was pointed out, gives Nopco facilities for production and distribution in Canada of its line of industrial processing chemicals and vitamin products. Yocum Faust will supplement Nopco's service to various industries. Its plant is set up to perform sulphonation, esterification, refining, pressing and heat treatment. In addition, the Canadian company produces lard oils and neatsfoot oils and has pioneered in the development of processed rapeseed oil.

According to Mr. Printon, plans are being formulated to give the Canadian organization the benefit of Nopco's research facilities. Nopco intends to add considerably to the Canadian plant, to accommodate expansion of production and sales, not alone in the industries in which Nopco is now established, but also in those industries toward which its research and pilot work have been increasingly directed.

Maleic Anhydride, Fumaric Acid Prices Cut Five Cents

National Aniline Division, Allied Chemical & Dye Corporation, New York, last week reduced prices on maleic anhydride and fumaric acid from 32 cents per pound to 27 cents per pound, carload lots. The new, lower prices were attributed to production economies resulting from expanded facilities, process improvements and increased output.

N.J. Zinc Names Stutz

New Jersey Zinc Sales Company, New York, has appointed G. F. A. Stutz manager of technical service, succeeding Bruce R. Silver, who became technical assistant to the vice-president.

Nobel Prizes to German Chemist, Dutch Physicist

A German chemist and a Dutch physicist last week were named winners of the 1953 Nobel Prizes in chemistry and physics. The chemist is Dr. Hermann Staudinger, who received a $33,000 award for work actually done in 1927, when he developed a method to synthesize fibers, thus paving the way for the modern plastics industry. The physicist is Dr. Fritz Zernike, who received another $33,000 award for developing a special microscope which enables scientists to study living cells colored by light waves. The microscope is widely used today in cancer research.

Cobalt Hydrate Production Started by Witco Chemical

Witco Chemical Company, New York, has announced the start-up of cobalt hydrate production. According to Witco's technical service report P-19, the material is a highly reactive source of cobalt in the synthesis of cobalt-containing compounds.

Cobalt hydrate is recommended by the company for use in the manufacture of cobalt paint driers and as an additive for lithographic printing inks. Copies of technical service report P-19 may be obtained from Witco, 260 Madison avenue, New York 16.

West Virginia Pulp Votes To Acquire Hinde & Dauch

Stockholders of West Virginia Pulp and Paper Company, New York, at a special meeting last week approved a plan to acquire Hinde & Dauch Company, Sandusky, Ohio, as a subsidiary through an exchange of stock. As prerequisites for the exchange offer to Hinde & Dauch, the stockholders also approved proposals to reclassify and split West Virginia's common stock.

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Price Index Advances

The overall OPD price index moved upward, reversing the trend of the previous two weeks. In the heavy chemicals market the materials making gains were cobalt metal, tin chloride, tin tetrachloride and tin sulphate, as well as potassium stannate and sodium stannate. The reductions in this market were limited to quicksilver. Rosemary oil, technical grade, and USP anise oil were advanced among essential oils and aromatic chemicals. This group witnessed reductions in cinnamic alcohol, benzyl acetate, rhodinol and lavandin oil. Among textile and leather chemicals, egg albumen and Maine potato starch were weaker.

Blackberry root bark was increased in the botanical drug category, as were olibanum gum, Czech anise seed, Polish and Dutch poppy seed, and varieties of mace and nutmeg. Items lowered here were arabic gum, Ceylon cinnamon, Jamaican pepper and Italian sage. Reductions among coal chemicals were noted for fumaric acid and maleic anhydride. There were no increases in this group. Copra, cottonseed meal and greases were raised in the oils and fats group. Increases in this market were also made by tallow and by coconut, corn and rice oils. Castor and cottonseed oil were reduced, along with lard and linseed meal.

DDT powder and dried blood were the only increases in agricultural chemicals, while castor pomace was lowered in this section. Drugs and fine chemicals were devoid of reductions and its only gain was made in milk powder. Natural gasoline was lowered among petroleum derivatives. There were no advances in this group.

Except for fifteen changes in botanicals listed on page 63, price changes during the past week were as follows (the number in parentheses after changes indicate the pages on which the market reports will be found):—

Prices Advanced

Cobalt metal, 20c. per lb. (38).
Cottonseed meal, 50c. to $1 per ton (84).
DDT powder, 5c. per lb. (42).
Dried blood, 25c. per unit of ammonia (42).
Greases, ¼c. per lb. (84).
Milk powder, skimmed, roller, 1c. per lb. (53), spray, ¼c. per lb.
Oil, anise, USP, 35c. per lb. (65).
Corn, crude, ½c. per lb. (84).
ref., ½c. per lb.
Rice, bran., ½c. per lb. (84).
Rosemary, Spanish, tech., 5c. per lb. (65).
Potassium stannate, .05c. per lb. (38).
Sodium stannate, .05c. per lb. (38).
Tallow, ¼c. per lb. (84).
Tallow, sulphonated, ¼c. per lb. (47).
Tin chloride, .06c. per lb. (38).
Crystals, .05c. per lb.
Metal, ¼c. per lb.
Sulphate, .06c. per lb.
Tetrachloride, .04c. per lb.
Wax, ouricury, ref., 1c. per lb. (84).

Prices Reduced

Acid, fumaric, tech., 5c. per lb. (48).
Alcohol, cinnamic, 10c. per lb. (65).
Benzyl acetate, 2c. per lb. (65).
Castor pomace, $2.50 per ton (42).
Egg albumen, flake, 10c. per lb. (47).
Gasoline, nat., gr. 3, 26-70 oct., ¾c. per gal. (44).
Lard, ¾c. per lb. (84).
Linseed meal, expeller, 50c. per ton (84).
Maleic anhydride, 5c. per lb. (48).
Oil, castor, No. 1, Brazil ½c. per lb. (84).
Cottonseed, ½c. per lb. (84).
Lavandin, 5c. per lb. (65).
Tung, ½c. per lb. (84).
Potato starch, Maine, ¼c. per lb. (47).
Quicksilver, $1 per flask (38).
Rhodinol, $5 per lb. (65).
Shellac, TN, 2c. per lb. (80).

OPD Price Index

THE OIL, PAINT AND DRUG REPORTER'S relative record of prices of chemicals and related materials is currently as follows:—

(100=1949 average)

Nov. 6, 1953	Oct. 30, 1953	Nov. 7, 1952
105.98	105.92	109.86

Sodium Methylate Facilities Are Installed by Harshaw

Harshaw Chemical Company has installed facilities for the manufacture of sodium methylate and sodium methylate liquid 25 percent at its Gloucester City, N. J., plant. According to Harshaw, its sodium methylate specification 101 is a dry, white powder of 95 percent minimum assay and is available for prompt shipment in 200-pound and 50-pound steel drums and ten-pound net steel pails. Sodium methylate liquid 25 percent was described as a solution in methyl alcohol and is available in 55-gallon, 425-pound net steel drums.

Phenylethers Offered by Dow

Announcement of the availability of two phenylethers and substituted phenyl ethers of glycols has been made by Dow Chemical Company, Midland, Mich. Under the name of "Dowanol 1" (ethyleneglycolphenylether) and "Dowanol 2B" (propyleneglycolphenylether), the new materials are being offered in technical or purified grade in both commercial and experimental quantities. Inquiries for literature and samples may be made to the technical service and development department of Dow.

Manganese Ore Pact Is Cancelled by Govt.

Cancellation by the government of a contract with Westmoreland Manganese Corporation, Batesville, Ark., has been announced by Edmund F. Mansure, Administrator of the General Services Administration. The contract, signed in April of 1952, called for production by the company of 264,000 tons of processed manganese ore within six years after production started, or by June 30, 1959. Under it, the government agreed to advance $3,807,250 against production, to be used for construction and equipment, and completion of land purchases. The advance carried a 4 percent annual interest charge on the unpaid balance.

To date, the government has advanced a total of $2,800,000. The action, Mr. Mansure said, was taken "because of default by Westmoreland in failing to comply with the terms" of the agreement. He said no ore had been delivered and that the construction facilities called for by the contract had not been completed. M. F. Highsmith, president of the company, was notified of the cancellation and advised that " . . . you will please grant the government immediate possession of the facilities and properties covered by the mortgage securing advances heretofore made." The letter was signed by A. J. Walsh, Commissioner of the Emergency Procurement Service of GSA. This unit took over the servicing of contracts previously made by the Defense Materials Procurement Agency, which was abolished by executive order in August 14, 1953.

In April of this year, the original agreement was amended so that government foreclosure could take place without the sixty-day notice period specified in the mortgage. This was done said Mr. Mansure, because "at that time the financial position of the company appeared to be such that foreclosure might become a necessity—which it now has." On September 9, a meeting was held by representatives of both parties to consider an appeal by Westmoreland for further funds advances needed to defray outstanding obligations and strengthen working capital. The meeting heard a technical panel which had been created August 27. On the basis of the panel's findings, the decision to foreclose was reached.

Monsanto Picks Texas City As Polyethylene Plant Site

Selection of Texas City, Tex., as the site for Monsanto Chemical Company's first polyethylene production plant was announced last week. Robert K. Mueller, general manager of Monsanto's plastics division, said that construction work is now under way.

Located adjacent to Monsanto's existing Texas City plant, the new polyethylene unit, operated by the plastics division, is expected to produce commercial quantities of polyethylene starting the fourth quarter of 1954. Plans announced earlier this year set initial annual capacity at about 66,000,000 pounds, with a 50 percent increased capacity scheduled for 1957 (OPD, 4/6/53).

Mich. Chemical Chairman

Theodore Marvin has been elected chairman of the board of directors of Michigan Chemical Corporation, St. Louis, Mich. Mr. Marvin, formerly with Hercules Powder Company, Wilmington, Del., was made president of Michigan Chemical in July, and will continue in that office.

American Polymer Absorbed Within Borden Chemical Unit

Acquisition of the American Polymer Corporation of Peabody, Mass., was announced last week by William F. Leicester, vice-president of the Borden Company and president of Borden's chemical division, New York. The move, he explained, is in line with the division's policy of expansion in the field of basic chemicals.

The acquisition includes American Polymer plants in Illiopolis, Ill., Montreal, Canada, and in Sao Paolo, Brazil, as well as Peabody. All these plants produce resin emulsions and solutions of various types from a number of base monomers.

"American Polymer will operate as a separate department of our chemical division," Mr. Leicester said. "Strengthened polymerization facilities will enable an increased production of vinyl, butadiene, styrene and acrylic and methacrylic emulsions." Present plans call for the opening of an American Polymer sales office in Boston. Expanded facilities for manufacturing, as well as for research and development, are planned for the near future, Mr. Leicester said.

American Polymer Corporation was founded in 1944 by William Abramowitz, who is now a director; Ashworth Stull, president, and Dr. S. J. Baum, general manager. These and other executives will remain to operate the department. The present sales force will also continue with the company.

Wyandotte Names Lundsted

Wyandotte Chemicals Corporation, Wyandotte, Mich., has promoted Dr. Lester G. Lunsted to director of chemical research. Dr. Lunsted had been assistant to the director of research since 1951.

Chemistry's Possibilities Cited by Medalist of SCI

Applied chemistry cooperating with applied democracy can bring alive the tragically large portion of the earth's population that is underfed and make the whole world thrive through new abundance of food, materials, power, machine that run for days or weeks without refueling, and even controlled weather, said Charles S. Munson, chairman of the boards of Air Reduction Company, Inc., New York, and of the Manufacturing Chemists' Association, in accepting the Chemical Industry Medal for 1953 at the Waldorf Astoria hotel, New York, October 30.

The Chemical Industry Medal, awarded for "conspicuous services to applied chemistry" by the American section of the Society of Chemical Industry, was presented to Mr. Munson by Harry B. McClure, past chairman of the section, and vice-president of Carbide & Carbon Chemicals Company. Crawford H. Greenewalt, recipient of the medal in 1952 and president of E. I. duPont de Nemours & Co., Wilmington, Del., introduced the medallist. Lauren B. Hitchcock, chairman of the American section of SCI, presided at the presentation dinner and meeting.

Charles S. Munson

Crossroads of Chemical Age

This chemical age, Mr. Munson said, "can be, and should be, the fulfillment of mankind's age-old dream of peace and prosperity, if mankind is wise enough to

—Continued on page 56

Lucidol Peroxide Deliveries To Return to Normal in Jan.

Lucidol Division of Novadel-Agene Corporation, whose liquid peroxide production facilities were destroyed by a series of explosions at its Tonawanda, N. Y., plant in September (OPD, 9/28/53), has announced that it expects to resume production on most of its products by the end of this year. The company added that it looks for a start-up of regular deliveries in January.

Immediately following the accident, which also resulted in a temporary halt to Lucidol's production of some of its solid and paste compounds, the company took steps to set up added facilities at another location. Under construction now are three individual operating units for the production of liquid peroxides. According to the company, the units have been designed in such a way that they will be interchangeable and will, in effect, give Lucidol three separate plants for the production of these products.

The company has also arranged for immediate production of tertiary butyl hydroperoxide, tertiary butyl perbenzoate and ditertiary-butyl peroxide. Regular shipments of these products are due to be resumed early next month.

Lignin Division Set Up By W. Va. Pulp & Paper

West Virginia Pulp & Paper Company, New York, has announced the formation of a new division to broaden the commercialization of its lignin products. The division will be under the direction of Dr. Paul Wiley, who has been director of the company's development department at Charleston, S. C., since 1947.

The new organization will begin its operations immediately and will be known as the polychemicals division. The new unit will be located at Charleston and its activities will embrace all phases of lignin operations.

Margarine Seen Large Oils Outlet Next Year

The margarine industry promises to absorb in the next year "something on the order of 750,000,000 pounds of soybean oil, 300,000,000 pounds of cottonseed oil and 50,000,000 pounds of other fats and oils, assuming present ratios of uses of these ingredients remain fairly constant," S. F. Riepma, president of the National Association of Margarine Manufacturers, declared in an address before the American Oil Chemists' Society's twenty-seventh annual fall meeting in Chicago last week.

"This is equivalent to 3,750,000 acres of beans and 3,800,000 acres of cotton, at 1953 production rates. Without margarine, the present government stocks of cottonseed oil would over that period increase by 32 percent, and government holdings of soybeans 50 times over," Mr. Riepma said.

Other Margarine Uses Urged

"The consumption of margarine, of course, need not be dependent altogether upon the relatively constant level of total table spread consumption. Continued research to improve margarine's quality, better handling, sound merchandising, and the development of an increasing group of persons who prefer margarine—these are our challenges. To help answer them, we look to you who have contributed to make modern margarine what it is today. We are confident that the margarine success story, based on scientific knowledge and the principle of fair competition, has still additional chapters to come. At the same time, we point out the serious implications to all concerned in this interconnected food fats field of irresponsible nutritional claims, artificial legislative restrictions on one food fat for the supposed benefit of another, and other efforts to single out one industry for public attack simply because it competes with another industry or another food," Mr. Riepma went on.

"No thoughtful person can appear before a group of this kind and not ask himself the reason for its existence, its character, its historical connection with his product. I think it is apparent from my preceding remarks that in my judgment the oil chemists, biochemists, nutritionists and related professions, have contributed, and must contribute, essentially to the growing acceptance and prestige margarine enjoys.

Scientists' Contributions Cited

"But science today is not what it was in Herbert Spencer's simpler and more optimistic time. We have a fateful preoccupation with the grave problems of survival for mankind's rapidly increasing numbers. Much more of our destiny than we probably realize has come into the hands of scientists, including those who develop food resources and nutritional enlightenment. In our highly complicated field of food fats, so many questions have arisen that we may in fact be only at the

—Continued on page 46

Heyden Sells Its Antibiotics Line to American Cyanamid

Simon Askin, president of the Heyden Chemical Company, and K. C. Towe, president of American Cyanamid Company, announced last week that their companies had signed an agreement for the sale by Heyden to Cyanamid of the former's antibiotic division, including the plant located at Princeton, N. J., and Heyden's patent rights and processes relating to the manufacture of antibiotics.

The antibiotics presently produced and sold by Heyden are not now manufactured by Cyanamid. The acquisition provides Cyanamid with additional facilities for expansion in the pharmaceutical field and adds to Cyanamid's line of products in this field, providing facilities for the manufacture of penicillin, streptomycin and neomycin.

Chlorine Dioxide Agreement Made by Mathieson, Pennsalt

Mathieson Chemical Corporation, Baltimore, Md., has announced the consummation of an arrangement with Pennsylvania Salt Manufacturing Company,, Philadelphia, whereby Pennsalt will have available Mathieson's experience in the large-scale generation of chlorine dioxide for use in paper mills.

Pennsalt will promote the use of Mathieson's chloride dioxide generation system and will make available its own experience in this field. Pennsalt manufactures sodium chlorate from which chlorine dioxide is produced in the Mathieson generation system. Mathieson's process has been used for years as one step in its manufacture of sodium chlorite.

Washington Talks It Over

By Ralph L. Cherry

The chemical industry is a relatively safe industry—from the standpoint of its injury rate—within which to work in spite of the many hazardous products with which workers are in daily contact. In fact, one of the safest of all branches of industry is explosives manufacturing, where the injury rate for the past two years has been less than 3.5 injuries for every million man-hours worked.

The Bureau of Labor Statistics has just completed compiling the injury rates by industry for 1952 with comparisons for 1951. It shows that the campaigns that have been under way for the past several years for greater safety are beginning to pay off in reduced injuries in spite of the higher rates of industrial activity. For manufacturing as a whole, the injury rate last year was only 14.3 injuries per million man-hours worked, or 8 percent below the 1951 average, and the lowest in the bureau's twenty-seven-year record keeping work.

The rate in the chemical industry was below the average of all manufacturing, amounting to 10.1 as compared with 11.5 in 1951. All branches of the industry reported fewer injuries than in 1951 except in the manufacture of synthetic rubber and manufacture of soap and related products. The industry's record for 1952 was:—Industrial inorganic chemicals, 8.0; industrial organic chemicals, 4.7, including plastics 5.4, synthetic rubber 3.3, synthetic fibers 1.6, explosives 3.4, and miscellaneous 7.0; drugs and medicines, 8.7; soil and related products, 9.4; paints, pigments and related products, 11.7; fertilizers, 19.8; vegetable and animal oils and fats, 22.5; compressed and liquefied gases, 11.8, and miscellaneous chemicals and allied products, 17.9.

Worse Drought Forecast

This year's drought conditions that have touched almost every section of the country at some time or other may be just a prelude to an even worse drought affecting the entire North American continent next year. Scientists state that industry should be forewarned that the climatic cycle of one dry year of major seriousness every twenty-three years is just about complete.

They look for wells all over the country to dry up from a lowering of the water table, making it necessary for plants in industries to drill deeper for adequate water supplies or curtail operations. This year's experiences in some sections of the country, notably Texas, where water had to be hauled into communities to meet even household needs,

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Association Meetings

This Week

American Petroleum Institute, annual meeting, Conrad Hilton hotel and Palmer House, Chicago, November 9-12.

Chemical Bureau Alumni Association, fall meeting, Lexington hotel, New York, November 12.

Flax Institute, annual meeting, Nicollet hotel, Minneapolis, Minn., November 12-13.

Salesmen's Association of the American Chemical Industry, annual buffet dance, Plaza hotel, New York, November 13.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Commodore hotel, New York, November 10.

Textile Research Institute, annual meeting, Commodore hotel, New York, November 12-13.

American Chemical Society, division of chemical marketing and economics, joint meeting with CMRA, Shoreham hotel, Washington, D. C., November 18-19; regional conclave, Jung hotel, New Orleans, La., December 10-12.

American Drug Manufacturers Association, annual meeting, June 28-30, 1954.

American Fair Trade Council, annual open forum and luncheon, November 17, Roosevelt hotel, New York.

American Institute of Chemical Engineers, annual meeting Jefferson hotel, St. Louis, Mo., December 13-16.

American Pharmaceutical Manufacturers Association, midyear meeting, Waldorf-Astoria hotel, New York, December 7-9.

American Plant Food Council, annual meeting, Homestead, Hot Springs, Va., June 10-13, 1954.

American Water Works Association, Seattle, Wash., May 23-28, 1954.

Association of American Soap and Glycerine Producers, annual meeting, Waldorf-Astoria hotel, New York, January 25-28, 1954.

Association of Consulting Chemists and Chemical Engineers, symposium and banquet, Belmont Plaza hotel, New York, April 27, 1954.

Chemical Industries Exposition, Commercial Museum and Convention Hall, Philadelphia, November 30-December 5.

Chemical Institute of Canada, protective coatings division conference, Toronto and Montreal, February 25-26, 1954; annual conference and exhibition, Royal York hotel, Toronto, June 21-23, 1954.

Chemical Market Research Association, joint meeting with ACS division of Chemical marketing and economics, Shoreham hotel, Washington, D. C., November 18-19.

Cnemical Specialties Manufacturers Association, annual meeting, Mayflower hotel, Washington, D. C., December 6-8.

Commercial Chemical Development Association, winter meeting. Statler hotel, St. Louis, Mo., January 19, 1954; annual open meeting, Statler hotel, New York, March 17-18, 1954.

Drug, Chemical and Allied Trades section of the New York Board of Trade, annual dinner, Waldorf-Astoria hotel, New York, March 4, 1954.

Industrial Hygiene Foundation, annual meeting and professional conferences, Mellon Institute, Pittsburgh, Pa., November 18-19.

Industrial Research Institute, award dinner, San Francisco, April 22, 1954.

Manufacturing Chemists association, midyear meeting, Waldorf-Astoria hotel, New York, November 24.

Mid-Century Conference on Resources for the Future, Washington, D. C., December 2-4.

National Cottonseed Products Association, Shamrock hotel, Houston, Tex., May 7-11, 1954.

National Fertilizer Association, fall meeting, Atlanta Biltmore hotel, Atlanta, Ga., November 16-18.

National Foreign Trade Council, annual meeting, Waldorf-Astoria hotel, New York, November 16-18

Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, William Penn hotel, Pittsburgh, Pa., March 1-5, 1954.

Proprietary Association, foreign trade committee dinner meeting, November 17, Biltmore hotel, New York; executive committee meeting, December 10; scientific section-veterinary committee meeting, December 11, Biltmore hotel, New York.

Society of Cosmetic Chemists, fall meeting, Biltmore hotel, New York, December 10.

Toilet Goods Association, scientific section, winter meeting, Waldorf-Astoria hotel, New York, December 9.

Remington Medal Dinner December 7 at New Yorker

The New York branch of the American Pharmaceutical Association will hold its 1953 Remington medal dinner December 7 at the New Yorker hotel, New York. This year's medalist is Dr. Hugh C. Muldoon, dean of Duquesne University School of Pharmacy, Pittsburgh, Pa., who is being honored for his major contributions to the profession of pharmacy.

SBA Now Headed by Barnes

President Eisenhower last week named Wendell B. Barnes acting chief of the Small Business Administration. Mr. Barnes, former general counsel of the agency, succeeds William D. Mitchell, whose resignation was accepted by Mr. Eisenhower October 31.

Oils, Fats Output, Use: September

Statistics on production and consumption of oils, and fats, including raw materials and primary products have been compiled by the Bureau of Census, Department of Commerce, for the month of September. The data are as follows:—

Primary Products

	Production (Pounds)	Consumption (Pounds)	Stocks Sept. 30 (Pounds)
Animal foots from refining, 100% basis	2,756,000	2,773,000	4,907,000
Babassu oil, crude	.....	.....	[1] .....
refined	.....	.....	.....
Castor oil, No. 1	3,319,000	4,300,000	[2]29,868,000
No. 3, crude	1,049,000	2,424,000	[2]10,903,000
Chinawood or tung oil	[1]	3,714,000	19,644,000
Coconut oil, crude	37,129,000	47,498,000	[2]45,250,000
refined	31,763,000	29,108,000	9,540,000
Cod and codliver oil	150,000	1,407,000	4,732,000
Corn oil, crude	21,329,000	21,746,000	11,490,000
refined	19,739,000	18,802,000	4,177,000
Cottonseed oil, crude	157,634,000	104,666,000	89,090,000
refined	97,992,000	89,270,000	[3]927,026,000
Fish and marine mammal foots, 100% basis	[4]	[4]	822,000
Fish oil, refined	[4]	2,080,000	788,000
Fish oil, not specified, except liver oil	723,000	599,000	5,936,000
Fishliver oil, not specified	34,000	338,000	1,062,000
Grease, other than wool	43,010,000	30,324,000	100,393,000
Lard, rendered[5]	139,000,000	[6]9,263,000	24,146,000
refined[5]	95,000,000	8,017,000	18,293,000
Linseed oil, raw	55,033,000	46,290,000	552,030,000
refined	19,394,000	21,027,000	29,381,000
Marine mammal oil, not specified	.....	[7]	[4] .....
Menhaden oil	28,962,000	5,271,000	55,200,000
Neatsfoot oil	174,000	233,000	984,000
Oiticica oil	.....	737,000	2,784,000
Olive oil, edible	.....	171,000	4,525,000
inedible	.....	3,000	68,000
sulphur foots	.....	[1]	1,333,000
Palm oil, crude	.....	4,147,000	[2]16,647,000
refined	[1]	776,000	1,291,000
Palm kernel oil, crude	.....	3,571,000	8,534,000
refined	2,247,000	2,129,000	579,000
Peanut oil, crude[8]	4,860,000	4,971,000	1,115,000
refined	4,652,000	3,077,000	3,198,000
Perilla oil	.....	.....	[1] .....
Rapeseed oil, crude	.....	[1]	[1] .....
refined	.....	361,000	1,610,000
Sardine (Pilchard) and herring oil	183,000	1,985,000	7,423,000
Sesame oil, crude	.....	[1]	[1]
refined	.....	154,000	337,000
Soybean oil, crude	172,756,000	232,468,000	111,852,000
refined	214,568,000	220,495,000	68,552,000
Sperm oil	.....	2,473,000	[2]15,778,000
Tallow, edible	13,505,000	9,107,000	5,003,000
refined	1,620,000	1,543,000	611,000
inedible	129,381,000	103,027,000	250,770,000
refined	26,253,000	22,181,000	12,147,000
Vegetable oil, not specified, crude	3,126,000	1,946,000	19,612,000
refined	2,241,000	763,000	3,423,000
Vegetable foots, 100% basis	19,325,000	14,347,000	49,699,000
Whale oil	.....	[7]	276,000
Wool grease	692,000	[9]	[10]1,934,000

Primary Products Except Oil

	Production	Shipments and transfers	Stocks Sept. 30
Cottonseed cake and meal ..... tons.	241,458	198,719	[11]112,687
hulls ..... tons.	109,917	104,917	47,162
linters ..... running bales.	[12]171,759	132,717	[12]98,008
hull fiber ..... lbs.	2,393,000	1,756,000	900,000
motes and grabbots ..... lbs.	2,643,000	2,350,000	4,515,000
Soybean cake and meal ..... tons.	368,065	411,323	59,001
Lecithin ..... lbs.	1,819,000	1,970,000	1,470,000
Edible soy flour, full fat ..... tons.	[4]	[4]	174
other ..... tons.	4,124	3,975	881
Industrial soy flour ..... tons.	1,979	2,549	848
Other cake and meal—			
Castor bean ..... tons.	2,478	4,115	3,261
Copra ..... tons.	10,171	10,207	6,299
Corn germ ..... tons.	14,061	14,039	1,481
Flaxseed ..... tons.	51,065	45,680	22,191
Olive ..... tons.	.....	.....	[14] .....
Peanuts[13] ..... tons.	3,607	3,454	1,645
Tung nut ..... tons.	[14]	[14]	[14] .....
Other ..... tons.	3,206	3,394	1,978

Secondary Products

	Production (Pounds)	Consumption (Pounds)	Stocks Sept. 30 (Pounds)
Castor oil, chemically dehydrated	1,888,000	1,140,000	4,812,000
Deodorized oil[15]	25,916,000	11,274,000	8,338,000
Fatty acid stock, including spent and salvaged oils and fats, palm oil, refuse, etc. (100% fatty acid basis)	1,296,000	1,961,000	4,526,000
Fish and marine mammal fatty acids	[1]	829,000	2,276,000
Glycerin, chemically pure (100% basis)[17]	11,322,000	8,877,000	24,605,000
crude (100% basis)[17]	18,471,000	19,704,000	14,534,000
high gravity and yellow distilled (100% basis)	7,783,000	6,498,000	16,529,000
Grease oil and lard oil	4,212,000	3,210,000	6,163,000
Hydrogenated oil and fats, edible—			
Cottonseed	31,935,000	33,374,000	14,834,000
Soybean	121,515,000	115,161,000	32,874,000
Other	5,844,000	4,589,000	2,551,000
Inedible—			
Animal	2,932,000	2,963,000	3,414,000
Vegetable	[4]	1,407,000	1,656,000
Fish	[4]	1,973,000	2,609,000
Oleomargarine	114,574,000	[9]	19,350,000
Oleo oil	3,981,000	569,000	1,304,000
Shortening	152,322,000	698,000	89,440,000
Stearin, animal, edible	2,107,000	1,502,000	1,258,000
inedible	1,956,000	900,000	2,627,000
vegetable oil winter	9,810,000	10,555,000	13,596,000
Tall oil, crude, refined, including distilled and fractionated tall oil	25,193,000	18,520,000	65,998,000
Tallow oil	9,998,000	6,929,000	18,044,000
Winterized oil	49,346,000	28,596,000	19,670,000

Raw Materials at Mills

	Receipts (Tons)	Crushings (Tons)	Stocks Sept. 30 (Tons)
Castor beans	4,000	4,654	10,728
Copra	[14]	29,498	17,895
Corn germs	26,311	26,350	940
Cottonseed	1,323,217	509,670	1,063,646
Flaxseed	86,344	77,104	57,915
Olives	.....	.....	.....
Peanuts[18]	7,077	6,056	3,164
Soybeans	697,884	466,718	459,548
Tung nuts	.....	[14]	.....
Other	38,596	5,068	4,262

[1] Included in "Other vegetable oils" to avoid disclosure of figures for individual companies.
[2] Data for stocks of crude palm oil, crude coconut oil, castor oil, castor oil No. 1 and No. 3, and sperm oil are on a commercial stocks basis and do not include figures for stockpiles of strategic oils.
[3] Commodity Credit Corporation, U. S. Department of Agriculture, reported 793,046,000 pounds of refined cottonseed oil owned by them on Sept. 30.
[4] Not shown to avoid disclosure of figures for individual companies.
[5] Data on production collected by U. S. Department of Agriculture. Refined lard production data represent Federally Inspected Lard.
[6] Excludes quantities used in refining.
[7] Included in "Sperm Oil."
[8] Data on production and stocks held at crude oil mill locations, collected by Bureau of Agricultural Economics, U. S. Department of Agriculture.
[9] Data not available.
[10] Held by wool scourers.
[11] Commodity Credit Corporation, U. S. Department of Agriculture reported 33,614 tons of cottonseed cake and meal owned by them as of September 30, 1953. Of this quantity, 4,379 tons were reported held at oil mills.
[12] Includes 41,298 bales first cut, 119,188 bales second cut, and 11,273 bales mill run. Average gross bale weights: Total, 594.4; first cut, 577.2; second cut, 603.3; and mill run, 563.3 pounds.
[13] Includes 43,461 bales first cut, 47,021 bales second cut, and 7,526 bales mill run.
[14] Included in "Other" to avoid disclosure of figures for individual companies.
[15] Data collected by Bureau of Agricultural Economics, U. S. Department of Agriculture.
[16] Winterized-deodorized oil, hydrogenated-deodorized oil and cooking and salad oil not included.
[17] Includes data for synthetic glycerin.

TGA Scientific Section Sets Meeting Program

The scientific section of the Toilet Goods Association has announced the program for its winter meeting, to be held December 9 at the Waldorf-Astoria hotel, New York.

The following papers are scheduled for presentation: — "Toxicological Observation of Certain Surface-Active Agents," by Dr. J. K. Finnegan, associate professor of pharmacology at the Medical College of Virginia, and J. B. Dienna, Rohm & Haas Company, Philadelphia; "Psychometric Evaluation of Lipsticks," by Noel Schwartz and Dean Foster, U. S. Testing Company, Hoboken, N. J.; "Cologne Sticks and Related Products—Their Formulation, Manufacture and Analysis," by A. L. Fishbach, Oxzyn Company, Clifton N, J., an affiliate of American Home Products Corporation

Also, "Statistical Short-Cuts," by W. C. Frey and L. B. Dobie, Bristol-Myers Products Division of Bristol-Myers Company, New York; "Silicone Properties and Use in Cosmetics," by E. G. Tajkowski and T. H. Reilly, silicone products department, chemical division, General Electric Company Pittsfield, Mass.; "Use of Hair Clippings in the Evaluation of Shampoos," by Drs. V. C. Ester, J. M. Longfellow and H. Henkin, research and development laboratories of Colgate-Palmolive Company, Jersey City, N. J., and "Application of Control Chart Technics," by Allegra H. Rodgers, quality control statistician for E. R. Squibb & Sons, New York, a division of Mathieson Chemical Company.

Textile Research Institute Annual Parley This Week

The Textile Research Institute will hold its twenty-fourth annual meeting November 12 and 13 at the Commodore hotel, New York.

The first day will be given over to two general sessions, with Thomas G. Hawley, jr., director of research for United Merchants, Laboratories, Inc., presiding in the morning and Leonard Smith, director of utilization research for the National Cotton Council of America, serving as afternoon chairman.

The two sessions on the thirteenth will take the form of a symposium on fiber blends. Carl Setterstrom, general manager, textile fibers division, Carbide & Carbon Chemicals Company, will preside in the morning, while J. A. Woodruff of American Viscose Corporation will be the afternoon chairman.

Magnesium Ass'n Reelects J. S. Kirkpatrick President

J. S. Kirkpatrick, vice-president of research and development, Brooks & Perkins, Inc., Detroit, Mich., was unanimously reelected president of the Magnesium Association at its ninth annual meeting, held November 2 and 3 at the Biltmore hotel, New York.

L. G. White of Dominion Magnesium, Ltd., Toronto, was named vice-president. J. V. Cosman of Superior Bearing Bronze Company, Brooklyn, N. Y., was made treasurer, while Miss Martha I. Hansen was continued as assistant secretary.

Armed Forces Chemical Ass'n Unit Meets Nov. 19

The New York chapter of the Armed Forces Chemical Association will hold a luncheon reunion at noon, November 19, in the Baroque Room of the Belmont-Plaza hotel, New York. W. D. Wilkinson, vice-president of the national association, will be the guest speaker. Mr. Wilkinson is chairman of the organization and membership committee of the National Association.

Society of Chemical Industry Convenes in Liverpool in '54

The Society of Chemical Industry will hold its seventy-third annual general meeting in Liverpool, England, July 12 through 17, 1954, as the guest of the Liverpool section. The meeting will be held at the University of Liverpool.

SOCMA Luncheon Tuesday

The Synthetic Organic Chemical Manufacturers Association will hold its regular luncheon meeting tomorrow at the Commodore hotel, New York, with Dr. Cary R. Wagner, association president, as the principal speaker. Dr. Wagner's topic will be "SOCMA and the Future of Research in the Organic Chemical Industry."

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Caustic Potash (Flake, Solid, Liquid)
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Sodium Bicarbonate
Potassium Carbonate

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ANHYDROUS SODIUM SULPHATE

—99.9%

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Disodium Phosphate Crystal
Trisodium Phosphate
Tetrasodium Pyrophosphate
Tripolyphosphate

MISCELLANEOUS

Calcium Chloride
V.C.F. Salt

FINE CHEMICALS

Phenol Sulphonic Acid
Aluminum Chloride 32° Be'

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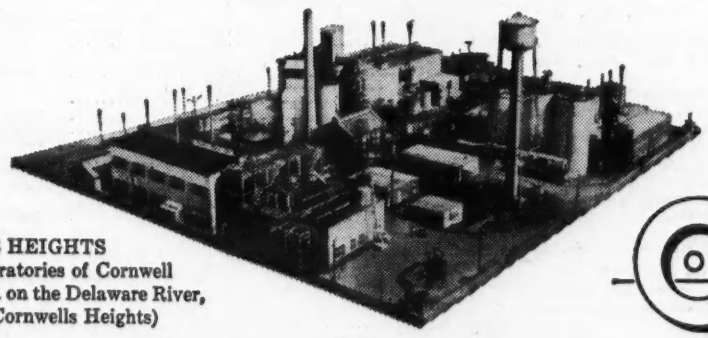

CORNWELLS HEIGHTS
Plant and laboratories of Cornwell Chemical Corp. on the Delaware River, Philadelphia (Cornwells Heights)

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Current Market Quotations

Chemicals and Related Materials

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Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, November 6 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low may be accounted for by differences in quantity, quality, locality, or individual suppliers' views.

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A

Acacia (see Gum arabic).		
Acenaphthene below 92.5 C., m.p., dms. works	lb.	.40 - —
above 92.5 C., m.p., bbls., dms., works	lb.	.41 - .50
Acetaldehyde, 99% dms., c.l., frt. equald	lb.	.1250- .1435
l.c.l. frt. equald	lb.	.1350- .1535
tanks, frt. equald	lb.	.1050- .1300
Acetaldol (see Aldol)		
Acetanilide tech., bbls., c.l., dlvd	lb.	.29 - —
ton lots	lb.	.30 - —
smaller lots	lb.	.30½- —
USP, bbls., 2,000-lb. lots	lb.	.80 —
smaller lots	lb.	.81 .86
Acetic anhydride, dms., c.l., dlvd E.	lb.	.15½- —
l.c.l., dlvd. E	lb.	.17 - —
tanks, dlvd. E	lb.	.14 - —
Acetoacetanilide fib dms., c.l. dlvd.	lb.	.75 - —
l.c.l., dlvd.	lb.	.76 - —
Acetoacet-o-chloroanilide, fib., dms., c.l., dlvd	lb.	1.27 - —
l.c.l., dlvd.	lb.	1.28 - —
Acetoacet-o-toluidide, fib., dms., c.l. dlvd	lb.	.78 - —
l.c.l. dlvd	lb	.79 —
Acetone, CP, dms., c.l., dlvd	lb.	.10½- —
l.c.l., dlvd	lb.	.11½- —
tanks, dlvd.	lb.	.08½- —
Methyl (see M)		
Acetonitrile, dms., c.l., works	lb.	.45 - —
l.c.l., works	lb	.47 - —
Acetophenetidin USP bbls. works, frt. equald	lb.	1.15 1.17
Acetophenone cns., dms	lb.	1.21 - 1.85
tech. dms l.c.l. works	lb	.75 —
N-Acetyl-p-aminophenol, dms., frt. adjusted	lb.	1.75 - 1.85
Acetyltributyl citrate, tech. dms., c.l	lb.	.33½- —
l.c.l., works	lb.	.38½- —
tanks	lb.	.32 - —
Acetyltriethyl citrate, tech., dms., c.l	lb.	.37½- —
l.c.l.	lb.	.38½- —
tanks	lb.	.36 - —
Acid, abietic, com'l, dms., c.l., works	lb.	.12 - —
l.c.l., works	lb.	.1390- —
cryst., dms., c.l., works	lb.	.06½- —
l.c.l., works	lb.	.07 .07½
Acetic, com'l or redist., 28%, bbls	100 lbs	5.50 - —
56%, bbls	100 lbs.	9.65 - —
70%, bbls	100 lbs.	11.70 - —
80%, bbls	100 lbs.	12.45 - —
glacial, synthetic, CP, dms., works	100 lbs.	15.00 -16.00
tech., dms., c.l., works or dlvd	100 lbs.	10.50 12.00
l.c.l., same basis	100 lbs.	11.00 -13.00
tanks, works or dlvd.	100 lbs.	9.00 -10.00
USP cbys. inclusive works.	100 lbs.	24.00 -25.00
dms., works	100 lbs.	13.50 -14.50
Acetic annydride (see Acetic anhydride above).		
Acetylsalicylic USP special, bbls., makers, primary distrib., point of ship't, 1000-lb. lots standard, fine cryst., gran., (30-40 mesh) powd. (80 mesh), bbls. same basis,	lb.	.60 - —
Freight equald, ship't identical quantity over standard routes, from N. Y., Phila., Midland, Mich. Chicago and St Louis		
Adipic, fib. dms., works	lb.	.37 - .37½
Aminoacetic NF bbls., frt. adjusted	lb	1.50 - 1.75
p-Aminobenzoic, tech., dms., works	lb.	1.74 - 1.77
USP, dms., 1,000-lb. lots or more, worsk	lb.	2.50 - —
smaller lots, works	lb.	2.55 - 2.60
p-Aminosalicylic, dms., 1,000-lb. lots or more, frt. adjusted	lb.	4.00 - —
smaller lots, same basis	lb.	4.05 - 4.50
Anthranilic resub., bbls	lb	2.10 —
tech., bbls., frt. equald	lb.	1.10 - 1.21
Arsenous, tech (see Arsenic, white).		
USP (see Arsenic trioxide)		
Ascorbic USP dms., 25-50 kilo lots,	kilo	21.00 - —
10-kilo lots	kilo	21.35 - —
5-kilo lots	kilo.	21.75 - —
bots., 1-kilo lots	kilo.	22.00 - —
500-gram lots	kilo.	22.50 - —
Battery, cbys., c.l., works, E.	100 lbs.	2.35 - —
l.c.l., works, E	100 lbs.	2.65 - 3.45
Benzoic, tech., bbls., dms., 100-lb. lots or more	lb.	.44 - —
USP, bbls., dms., 100-lb. lots or more	lb.	.54 - —
Betahydroxynaphthoic (see Acid, b-Oxynaphthoic).		
Betaoxynaphthoic (see Acid, b-Oxynaphthoic).		
Boric, tech., 99½%, cryst., bgs., c.l., works	ton.	124.25- —
ton lots, ex whse., N. Y. or Chi	ton.	172.00- —
smaller lots, same basis,	ton.	177.00- —
bbls., c.l., works	ton.	148.75- —
ton lots, ex whse., N. Y. or Chi	ton.	196.50- —
smaller lots, same basis,	ton.	201.50- —
gran., bgs., c.l., works	ton.	99.25 - —
ton lots, ex whse., N. Y. or Chi	ton.	147.00- —
smaller lots, same basis,	ton.	152.00- —
bbls., c.l., works	ton.	123.75- —
ton lots, ex whse., N. Y. or Chi	ton.	171.50- —
smaller lots, same basis,	ton.	176.50- —
bulk, c.l., works	ton.	94.25 - —
powd., bgs., c.l., works	ton.	104.25- —
ton lots, ex whse., N. Y. or Chi	ton.	152.00- —
smaller lots, same basis,	ton.	157.00- —
Acid, boric, tech. powd., bbls., c.l., works	ton.	128.75- - —
bbls., c.l., works	ton.	128.75- —
ton lots, ex whse., N. Y. or Chi	ton.	176.50- —
smaller lots, same basis,	ton.	181.50- —
Boric acid in kegs $45.50 per ton higher than in paper bgs. USP boric acid $25 per ton higher.		
Broenners, bbls	lb.	1.76 - —
Butyric, 99%, dms., c.l., works,	lb.	.34 - —
l.c.l., works	lb.	.34½- —
tankcars, works	lb.	.32½- —
Cacodylic, bots	lb	10.50 13.00
Camphoric, natural, dms	lb.	4.00 4.75
synth, dms	lb	4.00 4.75
Capric, dms	lb.	.26½- .28
Caprylic, dms	lb.	.32¾- .34½
Cassella, dms., frt. alld	lb.	1.44 1.75
Castor oil, dms	lb.	.35½- .36
Chicago bbls., frt alld	lb	3.21 —
Chloroacetic, mono-, purified, flake, 99%, dms	lb.	.23½- .25½
o-Chlorobenzoic, fib. dms., works	lb.	1.13 - —
p-Chlorobenzoic, fib. dms., works	lb.	1.59 - 1.62
Chlorosulfonic, dms., c.l., frt. equald	lb.	.0465- —
l.c.l., frt. equald	lb.	.0515- —
tanks, frt. equald	lb.	.0415- —
Acid, chlorosulphonic, in stainless steel dms. ½c. per lb. higher.		
Cholic, 25-100-lb. bots., fiber dms.	lb.	.No prices.
Chromic 99¾%, dms., c.l., works	lb.	.27½- —
l.c.l., works	lb.	.28 - .29
NF (see Chromium trioxide)		
Cinnamic, refd., bots	lb.	2.50 - 3.50
Citric, USP, anhyd., gran., fine gran., dms., c.l.	lb.	.28¾- —
10,000-lb. lots, 1 ship't.	lb.	.29¼- —
smaller lots	lb.	.29¾- .31¼
hydrous, gran., fine gran., dms., c.l	lb.	.27 - —
10,000-lb. lots, 1 ship't.	lb.	.27½- —
smaller lots	lb.	.28 - .29½
Powdered citric acid ½c. higher.		
Cleve's, mixed, bis	lb.	.79 - —
Coconut oil, dist., dms	lb.	.27 - .28¾
tankcars	lb.	.25¼- —
double dist., dms	lb.	.27¾- .29½
tankcars	lb.	.26 - —
Corn oil, dist., dms	lb.	.13 - .14¾
tanks	lb.	.11½- —
Cottonseed oil, dist., dms	lb.	.12 - .13¾
double, dist., dms	lb.	.12½- .14¼
Acid, 2,3-Cresotic, dms., ton lots, works	lb.	.66 - —
smaller lots, works	lb.	.68 - —
Cresylic, coaltar, dom., 50% 207°C or above, ret. dms., c.l., frt. equald	gal.	.98 - —
l.c.l., same basis	gal.	1.03 - —
non-ret., dms., c.l., same basis	gal.	1.01 - —
l.c.l., same basis	gal.	1.04 - —
tanks, same basis	gal.	.90 - —
204° to 207°C., ret., dms., c.l., same basis	gal.	1.03 - —
l.c.l., same basis	gal.	1.06 - —
non-ret., dms., c.l. same basis	gal.	1.06 - —
l.c.l., same basis	gal.	1.09 - —
tanks, same basis	gal.	.95 - —
imp. 75% at 215°C. or over, dms., ex whse	gal.	.75 - .90
petroleum, dom., 195° to 213°C, non ret. dms., c.l. San Francisco and Los Angeles	gal.	.71 —
l.c.l., same basis	gal.	.73 - .75
tanks, same basis	gal.	.58 - —
200° C. to 222° C., tanks, Wilmington, Cal	gal.	.58 - .63
211° C to 236° C. non-ret. dms., c.l., San Francisco and Los Angeles	gal.	.63 —
l.c.l., same basis	gal.	.65 .67
tanks, same basis	gal.	.50 - —
220° C to 242° C., tanks, Wilmington Cal	gal.	.50 .53
245° C to 298° C., tanks, Wilmington Cal	gal.	.46 - —
Crotonic, fib. dms., 200 lbs. or more, works	lb.	.45 - —
Cyanoacetic, tech. bbls	lb.	.90 1.25
Dehydrocholic, injection, fib dms., 10 to 100-lb. lots	lb.	.No prices.
oral, fib., dms., 10 to 100-lb. lots	lb.	.No prices.
Desoxycholic, fib dms 10 to 100-lb. lots	lb.	No prices.
Dichlorophenoxyacetic (see under 'D' 2,4-D)		
Diethylbarbituric (see Barbital)		
Diglycolic, bgs., works	lb.	.14 - —
2-Ethyl hexoic, dms, c.l., works	lb.	.35 - —
l.c.l., works	lb	.35½- —
tanks, works	lb.	.33½- —
F, crude, paste, bbls., works	lb.	1.67 - —
Folic, bots, fib. cns kilo-lots or more	gram.	1.60 - —
Formic, 85%, cbys., c.l., works	lb.	.1570- —
l.c.l., works	lb.	.1620- .1720
90%, cbys., c.l., works	lb.	.1625- —
l.c.l., works	lb.	.1675- .1775
Acid, fumaric, tech., bgs., dms	lb.	.27 - .33
Gallic, NF VII, bbls., 1,000-lb. lots	lb	1.80 —
smaller lots	lb	1.82 2.00
technical, bbls., 1,000-lb lots	lb	1.58 —
smaller lots	lb	1.69 1.78
Gamma dry, ground, bbls., frt. alld	lb	1.50 - —
paste, bbls., frt. alld	lb	1.45 - —
Gentisic, 100-lb fib dms	lb	8.50 - —
Gluconic, tech., 50% bots	lb.	.23½- .31½
dms	lb.	.14½- —
cbys.	lb.	.17½ —
l-Glutamic, 99½% fib. dms., 100-lb lots works	lb	2.45 2.53
25-lb. lots, works	lb.	2.60 2.68
Glycerophosphoric, 35%, dms., works	lb.	2.25 2.35
Glycolic (see Acid hydroxyacetic).		
H, dry, 100% basis, bbls., works,	lb.	.82 - —
paste, 100% basis, bbls., works,	lb.	.80 - —
Hydriodic, 1.50 s.g., cbys	lb.	2.94 - —
1.70 s.g., cbys	lb.	3.23 - —
Hydrobromic, medicinal, 48%, cbys., dlvd E	lb.	.37 .43
Hydrochloric, anhydrous (see Hydrogen chloride).		
18° cbys., c.l., works	100 lbs.	2.50 - —
l.c.l., dlvd Metropolitan area	100 lbs.	3.25 - 4.50
tanks, works, frt. equald	ton.	35.00 - —
CP, USP consumers, cbys., extra, c.l., works	lb.	.11¾- —
l.c.l., same basis	lb.	.13¼ .13¾
5 pint bottles extra, cs., c.l., same basis	lb.	.16¾ —
l.c.l. same basis	lb	.19¼- —
Acid, hydrochloric, CP, USP prices to dealers 1½c per lb less.		
Hydrocyanic, cyls., frt. alld	lb.	.75 .95
dilute NF 2% 5-lb cots	lb	40 —
Hydrofluoric, anhyd., (see Hydrogen fluoride).	lb.	.27½ .29
tanks, works	lb.	.21 —
70%, steel dms., works	lb.	.18½- .22½
Hydrofluosilicic, basis 30%, dms., works	lb.	.06 - —
Hydroxyacetic, tech. 70% bbls., non-return., Phila., basis 100%	lb.	.136 - —
tanks, Belle, W Va., basis 100%	lb.	.095 —
Hypophosphorous, purif., 30%, cbys	lb.	1.30 1.32
USP, cbys	lb	88 —
Isonicotinic, 100 lb fib dms. works	lb.	5.00 - —
J, bbls, works, basis 100%	lb.	2.50 2.85
Koch, bbls, frt alld	lb	64 .70
L, bbls frt alld	lb	1.25 —
Lactic, edible 50% bbls., 20 or more	lb	.17 .20
smaller lots	lb.	.17½- .21
80%, bbls., 5 or more	lb.	.30 .3640
smaller lots,	lb.	.305 .3690
plastic grade, 50% bbls., 20 or more works	lb	21¾ —
1 to 19	lb.	.22¼- .22¾
80% bbls. 5 or more	lb.	.3815- —
tech., 22% bbls. c.l., works,	100 lbs	6.30 —
l.c.l., works	100 lbs.	6.70 - —
cbys. works	100 lbs	7.20 -12.20
44%, bbls. c.l. works	100 lbs.	11.45 11.95
l.c.l., works	100 lbs.	11.85 -12.50
NF 85%, cbys	lb.	.85 - .88
Laurent's bbls	lb	60 .87
Lauric, 90%, dms	lb.	.38½- .40¼
60%, dms	lb.	.22 - .23¼
Linseed oil, dist., dms	lb.	.2175- .2225
water white, dms	lb.	.2475- .2525
Maleic cryst. powd. dms.	lb	.37 .38
Malic, tech., dms	lb.	.50 —
Mandelic NF dms., 1,000-lb lots.	lb	2.35 —
smaller lots	lb	2.40 2.50
Metanilic, dms., works	lb	.57 .75
Methacrylic dms., c.l. and truckloads, works	lb	76 —
smaller lots, works	lb.	.76½- .80
Molybdic, 85-92%, dms, works	lb.	1.27 —
Monochloroacetic, (see Acid, Chloroacetic, mono-).		
tech., flake, 96-97%, frt. equald, dms	lb.	.20 .21
Muriatic (see Acid, hydrochloric)		
Myristic, flaked, dms	lb.	.27 - .28¾
solid, dms	lb.	.28 - .29¾
Naphthenic 220-230 acidity, dms., works	lb	.14 —
tanks, works	lb	.12 —
Naphthol(1)-4-sulphonic (see Acid, Neville and Winther's)		
Naphthol(1)-5-sulphonic (see Acid, L).		
Naphthol(1)-5-sulphonic,8-amino (see Acid, S).		
Naphthol(1)-3,6-disulphonic,8-amino (see Acid, H)		
Naphthol(2)-6,8-disulphonic (see Acid, Gamma).		
(2)-7-Sulphonic,2-amino (see Acid, J)		
Naphtholsulphonic, mixed (see Acid, Cleve's, mixed)		
Naphthylamine(1)-5-sulphonic (see Acid, Laurent's)		
(2)-6-sulphonic (see Acid, Broenner's).		
(2)-7-sulphonic (see Acid, F).		
(2)-1-sulphonic (see Acid Tobias)		
Neville and Winther's, dms., frt. alld	lb.	1.20 —
Nicotinic USP dms. frt adjusted	kilo	9.00 9.30
Amide (see Nicotinamide)		
Nitric 36° Be cbys., c.l., works, E.	100 lbs.	5.25 —
l.c.l., works, E	100 lbs.	5.55 6.35
38° Be cbys., c.l., works E	100 lbs	5.75 —
l.c.l., works, E	100 lbs.	6.05 6.80

Abbreviations

Used in OPD Market Quotations

ACS	American Chemical Society	dextro	dextrorotatory	NNR.	National Formulary
alld.	allowed	dist.	distilled		New and Nonofficial Remedies
ammo.	ammonia	distr.	distributor	NF.	
amorph.	amorphous	djns.	demijohns	No.	number
AMP.	American melting point	dlvd.	delivered	nom.	nominal
anhyd.	anhydrous	dms.	drums	ord.	ordinary
a.p.a.	available phosphoric acid	dom.	domestic	oz	ounce
artif.	artificial	E.	east	Pac.	Pacific
ASTM.	American Society for Testing Materials	e.p.	end point	pf.	proof
Be.	Baume	equald.	equalized	phos.	phosphate
bbls.	barrels	exp.	expressed	photo.	photographic
bgs.	bags	F	fahrenheit	pkgs.	packages
bls.	bales	ferment.	fermentation	powd.	powdered
bots.	bottles	ffa.	free fatty acid	precip.	precipitated
b.p.	boiling point	ffc.	free from chlorine	prod.	producer
b.p.l.	bone phosphate of lime	fib.	fiber	pt.	point
b.r.	boiling range	f.o.b.	free on board	pulv.	pulverized
bxs.	boxes	FPA.	free of prussic acid	purif.	purified
C.	centigrade	frt.	freight	redist.	redistilled
CD.	carboys	fus.	fused	refd.	refined
cbys.	completely denatured	gal.	gallon	refy.	refinery
c.i.f.	cost, insurance, freight	gran.	granular	reg.	regular
cks.	casks	grd.	ground	resub.	resublimed
c.l.	car lots	i.&a.	iron and aluminum	ret.	returnable
cns.	cans	i.b.p.	initial boiling	SD.	specially denatured
col.	color	imp.	imported	s.d	single distilled
coml.	commercial	incl.	included	S E.	southeast
conc.	concentrated	indust.	industrial	secs.	seconds
CP.	chemically pure	kgs.	point	s.g.	specific gravity
cps.	centipoises	lacq.	kegs	shipt.	shipment
cryst.	crystal	lb.	lacquer	solut.	solution
cs.	cases	l.c.l.	pound	s.u.	standard unit
ctns.	cartons	liq.	less than car lots	synth.	synthetic
cyls.	cylinders	m.a.p.	liquid	tanks.	railroad tank-cars
dbl.	double	M c.f.	mixed anilin point	tech.	technical
denat.	denatured	min.	thousand cubic feet	USP.	U S. Pharmacopoeia
dest-dist.	destructive-distilled	m.p.	minimum melting point	vis.	viscosity
		N.	nitrogen	VM&P	varnish makers & painters
		nat.	natural	W	west
		neut.	neutral	whse.	warehouse
				w w	water white

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

Acid, Nitric, 40°Be—Alcohol, Ethyl

Acid, nitric, 40° Be, cbys., c.l., works, E..100 lbs. 6.25 - —
i.c.l., works, E.... 100 lbs. 6.55 - 7.35
42° Be cbys., c.l., works, E. 100 lbs. 6.75 - —
i.c.l., works, E.....100 lbs. 7.05 - 7.85
58.5 to 68% HNO_3, tanks, works, basis 100% 100 lbs. 3.40 - —
94½ to 95½% HNO_3, tanks, works,, basis 100% 100 lbs. 4.40 - —
CP, NF, consumers, cbys., extra c.l., works lb. .13½- —
i.c.l. same basis .....lb. .15 - .15½
5 pint bottles, extra, cs., c.l., same basis lb. .17½- —
i.c.l., same basis .....lb. .19 - .25
p-Nitrobenzoic, dms., works..lb. .77 - —
Oleic, single distilled, dms.....lb. .13¾- .15½
tanks .....lb. .12 - —
double dist. (white), dms....lb. .16¼- 18
tanks .....lb. .14½- —
Oleum (see Acid, sulphuric, fuming)
Orthochlorobenzoic (see Acid, o-Chlorobenzoic)
Orthocresotinic (see Acid, 2, 3-Cresotic)
Oxalic, bbls., c.l., works.....lb. .16½- —
10,000-lb. lots, works.....lb. .16¾- —
smaller lots, works .....lb. .17¾- —
b-Oxynaphthoic, bbls., works..lb. 1.14 - —
Palm oil, double dist., dms....lb. .12¼- .13
Para-aminobenzoic (see Acid, p-Aminobenzoic)
Para-aminosalicylic (see Acid, p-Aminosalicylic)
Parachlorobenzoic (see Acid, p-Chlorobenzoic)
Paramethylphenylcinchonic (see Neocinchophen)
Paranitrobenzoic (see Acid, p-Nitrobenzoic)
Paratoluidinmetasulphonic (see Acid, p-Toluidine m-sulfonic)
Phenylacetic, pure, cryst., cns. lb. .75 - 1.70

Acid, phenylcinchoninic (see Cinchophen).
Phenylglycolic (see Acid, mandelic).
Phosphoric, food grade, 75%, cbys., c.l., works .100 lbs. 7.30 - —
i.c.l., works....100 lbs. 7.80 - 8.30
tanks, works.....100 lbs. 5.10 - —
NF, 85%, cbys., c.l., works..lb. .08½- —
i.c.l., works.....lb. .09 - .09½
Picric, NF, bbls.....lb. .55 - —
dms. smal.....lb. .81 - .87
tech., bbls .....lb. .32 - .33
Propionic, synth., pure, dms., c.l., works lb. .258 - —
i.c.l., works.....lb. .263 - —
tanks, works.....lb. .19 - .243
Pyrogallic, NF, (see Pyrogallol)
tech., bbls.....lb. 2.76 - 2.99
Pyroligneous, dms., incl., i.c.l, works gal. .36 - —
whse. .....gal. .50½- —
Ricinoleic (see Acid, castor oil, split).
S, bbls., works .....lb. 3.25 - —
Salicylic, crude, bgs.....lb. .38 - —
sublimed, tech., bbl., c.l....lb. .39 - —
i.c.l. .....lb. .46 - —
dyestuffs grade, bbls....lb. .41 - —
USP, cryst., bbls.....lb. .48 - —
powder, bbls. .....lb. .53 - —
Sebacic, purified, dms., c.l., works. lb. .80 - —
i.c.l., works.....lb. .82 - .86
Soybean oil, double dist., dms..lb. .15 - .16¾
single, dist., dms.....lb. .14½- .16¼
Stearic, double pressed, bgs. lb. .12¾- .14½
single pressed, bgs.....lb. .12¼- .14
triple-pressed, bgs.....lb. .15 - .16¾
Succinic, purified, cryst., bbls., works lb .62 - .75

Acid, sulfanilic, tech., dms., c.l., frt. alld..lb. .19 - —
i.c.l., frt. alld.....lb. .21 - —
Sulfuric, 60° Be, cbys., c.l., works..100 lbs. 2.00 - —
i.c.l., works .....100 lbs. 2.45 - —
tanks, works .....ton.18.60 - —
66° Be, cbys., c.l., works.... 100 lbs. 2.25 - —
i.c.l., works.....100 lbs. 2.55 - 3.35
tanks, works.....ton.22.35 - —
98%, tanks, works.....ton.23.50 - —
99-100%, tanks, works.....ton.23.95 - —
CP, NF, consumers cbys. extra, c.l., works frt. equald..lb. .09¾- —
i.c.l., same basis .....lb. .11¼- .11¾
5 pt. bots., extra, cs., c.l., works, frt. equald lb. .13¼- —
i.c.l., same basis lb. .14¾- .20¾
oleum, 20%, tanks, works..ton.25.00 - —
40% tanks, works.....ton.29.00 - —
65% tanks, works.....ton.39.50 - —
Tallow, dist., dms. .....lb. .11¼- .13
hydrogenated, dms. .....lb. .12 - .13¾
Tannic, NF, fluffy, bbls., 1,000-lb lots lb 1.50 - 1.60
smaller lots lb 1.65 - 2.76
powder, bbls., 1,000-lb lots lb 1.50 - —
smaller lots.....lb. 1.51 - 1.69
tech., dms .....lb. .95 - —
Tartaric, USP, dom., 230 or 250-lb., dms. c.l. lb. .57 - —
10,000-lb. lots, 1 ship't.lb. .37½- —
smaller lots .....lb. .38 - —
100-lb dms.....lb. .39 - —
small dms.....lb. .41 - .47
imported, bgs. .....lb. .31 - —
Thioglycolic, refined bgs. cbys., basis 100% lb. 1.60 - 1.86
Tobias, bbls., frt. alld .....lb. .74 - —
p-Toluenesulfonic, dms., c.l., works. lb. .16 - —
l.c.l., works.....lb. .17½- —

Acid, p-toluidine-m-sulfonic, bbls., works..lb. .92 - 1.04
Trichloroacetic, bots. .....lb. 2.00 - 2.50
Trichlorophenoxyacetic (see under "T" 2,4,5-T).
Tungstic, tech., kgs., works....lb. 4.30 - —
Undecylenic, dms. .....lb. 1.40 - —
Aconite root, bls.....lb. .50 - .60
Aconitine, amorph., mild, bots oz.27.50 - 32.50
cryst., potent, bots..... oz.78.00 - 85.00
Acrolein, tech., dms., c.l., works.lb. .47 - —
l.c.l., works.....lb. .47½- —
Acrylontrile, dms., c.l., works..lb. .37½- —
l.c.l., works .....lb. .38 - .40
tanks, works .....lb. .36 - —
ACTH, bots.....gm.20.00 - —
Adeps lanae (see Lanolin).
Adrenocorticotropic hormone (see ACTH).
Agar, USP, Kobe No. 1, strip, bls. lb. 2.30 - 2.50
powdered, 30 mesh., fib., dms...lb. 2.80 - 3.00
Alanine, dextro-laevo, dms., works. lb. 8.50 - 11.00
Albumen (egg), edible, flake, bbls., lb. 2.31 - 2.33
powder, bbls.....lb. 2.35 - 2.37
tech., cryst., bbls.....yb. 1.03 - 1.06
Albumin, blood, dark (see Blood, dried, soluble).
light, dms., l.c.l. .....lb. .65 - .90
Egg (see Albumen).
Alcohol, allyl, dms., c.l., dlvd....lb. .32 - —
l.c.l., dlvd.....lb. .33 - —
tanks, dlvd. .....lb. .30 - —
Amyl, ex fusel oil (see Fusel oil, ref.)
fermentation, ref'd., 126°-132°C, dms., c.l., dlvd lb. .32¾- —
i.c.l., dlvd .....lb. .33¾- .36
tanks, dlvd .....lb. .31 - —
128-132° C., dms., i.c.l. dlvd. lb. .33¾- .36
ACS grade, dms., i.c.l., dlvd lb. .35¾- —
mixed, primary, dms., c.l., works..lb .20¼- —
l.c.l., works.....lb. .21¼- —
tanks, works .....lb. .18¼- —
pentanol-1, (synthetic normal), c.l. works. lb. .42 - —
i.c.l., works.....lb. .43½- —
tanks, works .....lb. .40 - —
pentanol-2, dms., c.l., works..lb. .65 - —
l.c.l., works .....lb. .70 - —
tanks, works .....lb. .60 - —
Synthetic, dms., c.l., frt. alld. lb. .17 - —
l.c.l., frt. alld.....lb. .18 - —
tanks, frt. alld.....lb. .15 - —
secondary, dms., c.l., frt. alld. works, lb. .19 - —
l.c.l., works.....lb. .20 - —
tanks, works .....lb. .17 - —
tertiary, dms. c.l., frt. alld E. lb. .20 - —
l.c.l., frt. alld. E.....lb. .21 - —
tanks, frt. alld. E .....lb. .18 - —
Benzyl, NF, dms..... lb. .64 - .79
tech., dms., dlvd ..... lb. .47½- .49
Butyl, fermentation, normal, dms., c.l., frt. alld..lb. .15 - —
l.c.l., frt. alld.....lb. .16 - —
tanks, frt. alld .....lb. .13 - —
synthetic, normal, dms., c.l., dlvd..lb. .15 - —
l.c.l., dlvd .....lb. .16 - —
tanks, dlvd .....lb. .13 - —
secondary, dms., c.l., dlvd. lb. .13 - —
l.c.l., dlvd.....lb. .14 - —
tanks, dlvd.....lb. .11 - —
tertiary, dms., c.l., frt. alld. lb. .14 - —
l.c.l., frt. alld.....lb. .15 - —
tanks, frt alld .....lb. .12 - —
Capryl, 85%, dms., c.l., works..lb. .16½- —
l.c.l., works.....lb. .17 - —
tanks, works.....lb. .15 - —
95%, dms., c.l., works.....lb. .18 - —
l.c.l., works.....lb. .18½- .19
tanks, works.....lb. .16½- —
Cetyl, extra, bb., cns., 500-lb lots or more lb. .73 - —
smaller lots .....lb. .80 - 1.15
NF, bb. cns., 140-lb lots or more lb. .58 - .62
smaller lots.....lb. .59 - .62
Cinnamic, bots.....lb. 2.15 - 2.75
Decyl, bots .....lb. 1.75 - 2.00
Denatured, CD12, CD13, CD14, CD17, dms., c.l., dlvd E. of Rockies gal. .61½- —
l.c.l., dlvd., same basis gal. .65½- .70½
tanks, dlvd., same basis gal. .49½- —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Unit.
Proprietary solvent, dms., c.l., dlvd. E. of Rockies gal. .63 - —
l.c.l., same basis..... gal. .67 - .72
tanks, same basis ..... gal. .51 - —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Unit.
SD1, dms., c.l., dlvd. E. of Rockies gal. .62½- —
l.c.l., same basis..... gal. .66½- .71½
tanks, same basis ..... gal. .50½- —
SB2B, dms., c.l., dlvd. E. of Rockies gal. .61 - —
l.c.l., same basis ..... gal. .65 - .70
tanks, same basis ..... lb. .49 - —
SD3A, dms., c.l., dlvd. E. of Rockies gal. .60 - —
l.c.l., same basis ..... gal. .64 - .69
tanks, same basis ..... lb.gal. .48 - —
SD23A, dms., c.l., dlvd. E. of Rockies gal. .62½- .63
l.c.l., same basis ..... gal. .66½- .72
tanks, same basis ..... gal. .50½- .51
SD23H, dms., c.l., dlvd. E. of Rockies gal. .63 - —
l.c.l., same basis ..... lb. .67 - .72
tanks, same basis..... gal. .51 - —
SD 29, dms., c.l. dlvd. E. of Rockies gal. .60½- .61½
l.c.l., same basis..... gal. .65½- .70½
tanks, same basis..... gal. .48½- .49½
SD30, dms., c.l., dlvd. E. of Rockies gal. .60 - —
l.c.l., same basis..... gal. .64 - .69
tanks, same basis ..... gal. .48 - —
SD35A, dms., c.l., dlvd. E. of Rockies gal. .63 - —
l.c.l., same basis ..... gal. .67 - .72
tanks, same basis ..... gal. .51 - —
SD40, dmes., c.l., dlvd. E. of Rockies gal. .61 - —
l.c.l., same basis..... gal. .65 - .70
tanks, same basis..... gal. .49 - —
Diacetone, acetone-free, dms., c.l., dlvd. lb. .14 - —
l.c.l., dlvd..... lb. .15 - —
tanks, dlvd..... lb. .12 - —
tech., dms., c.l., dlvd..... lb. .13¼- —
l.c.l., dlvd..... lb. .14 - —
tanks, dlvd..... lb. .11½- —
Ethyl, 190 pf., USP, tax paid, dms., c.l., dlvd. E. of Rockies, gal.20.53 - —
l.c.l., same basis .. gal.20.59 -20.64
tanks, same basis .... gal.20.43 - —
tax free, dms., c.l., dlvd. E. of Rockies gal. .60 - —
l.c.l., same basis .. gal. .64 - .69
tanks, same basis .. gal. .48 - —
absolute, 200 pf., tax paid, dms., c.l., dlvd. E. of Rockies, gal.21.65 - —
l.c.l., same basis .... gal.21.69 -21.74
tanks, same basis .... gal.21.53 - —

For You Who Want
QUALITY in QUANTITY

It's a fairly simple matter to achieve quality and consistency at the pilot plant level. But here at Publicker we maintain those characteristics while producing millions of gallons annually. Customers who demand quality in quantity have been on our books for many, many years. May we add *your* name?

ACETALDEHYDE
ACETIC ACID, GLACIAL
ACETONE C.P.—AMYL ACETATE
BUTYL ACETATE, NORMAL
BUTYL ALCOHOL, NORMAL
ETHYL ACETATE—ETHYL ALCOHOL
FUSEL OIL, REFINED
ISOAMYL ALCOHOL
PACO SOLVENT, T.R. 590

PUBLICKER INDUSTRIES Inc.

1429 WALNUT STREET, PHILADELPHIA 2, PA.

PHILADELPHIA—LOCUST 4-1400 • PITTSBURGH—LOCUST 1-8527

New York & New England Distributor, Publicker Alcohol & Chemicals Sales Corporation

NEW YORK—MURRAY HILL 8-6379 • BOSTON—FAIRVIEW 4-1888

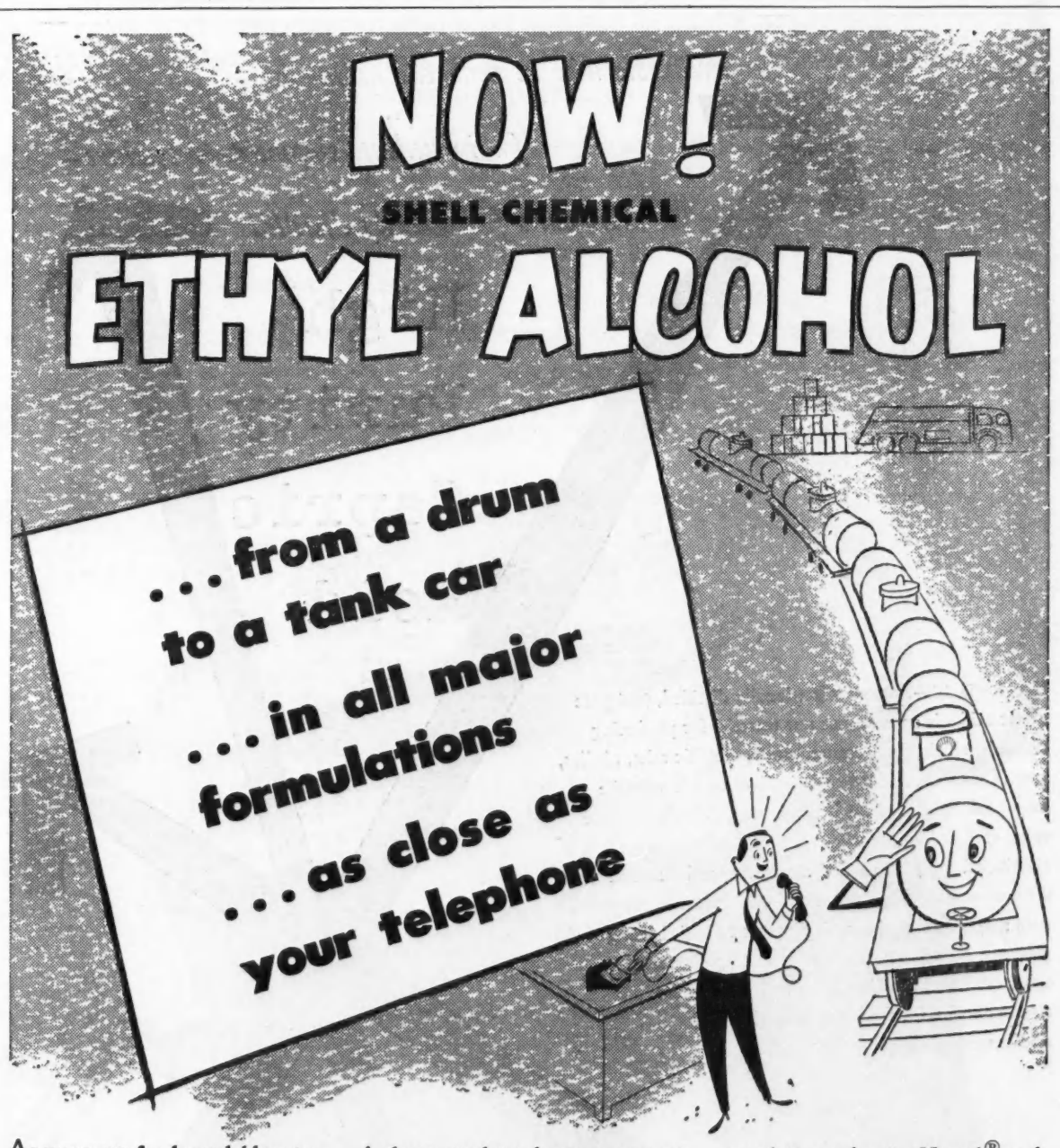
Alcohol, ethylbutyl, dms., c.l., works. lb. .29¼- .29½
l.c.l., works lb. .30 - —
tanks, works lb. .28 - —
Ethylhexyl, dms., c.l., dlvd. E. lb. .25¼- —
l.c.l., same basis lb. .26¼- —
tanks, same basis lb. .23½- —
Furfuryl, tech., cns., works lb. .30½- —
dms., c.l., works lb. .21½- —
l.c.l., works lb. .23½- —
tanks, works lb. .18¼- —
Isoamyl (see Alcohol, amyl, fermentation, refined).
Isobutyl, dms., c.l., dlvd lb. .13¾- .14
l.c.l., dlvd lb. .14½- .15
tanks, dlvd lb. .12 - —
Iso-octyl, dms., c.l., dlvd lb. .23½- —
l.c.l., dlvd lb. .24½- —
tanks, dlvd. E lb. .21¾- —
Isopropyl refd., 91%, dms., c.l., dlvd gal. .54½- —
l.c.l., dlvd. gal. .61½- —
tanks, dlvd gal. .41½- —
95%, dms., c.l., dlvd gal. .56¾- —
l.c.l., dlvd gal. .63¾- —
tanks, dlvd gal. .43¾- —
99%, dms., c.l., dlvd gal. .59 - —
l.c.l., dlvd gal. .66 - —
tanks dlvd. gal. .46 - —
Lauryl, bots. lb. 2.00 - 2.50
Methyl (see Methanol).
Methylamyl (see Carbinol, methylisobutyl)
Octyl, perfumer's grade, bots lb. 1.75 - 3.25
technical (see Octanol normal).
Pentothenyl (see Panthenol).
Phenylethyl, extra, dms. lb. 1.57 - 2.15
standard, dms. lb. 1.35 - —
Propyl, normal, dms., c.l., dlvd. lb. .12 - —
l.c.l., dlvd lb. .13 - —
tanks, dlvd lb. .10 - —
Polyvinyl, various grades, bgs., ton lots, works lb. .72½- .76
smaller lots works lb. .77½- .81
Tetrahydrofurfuryl, cns., Waverly, N Y lb. .54 - —
dms., c.l., Niagara Falls, N. Y. lb. .45 - —
l.c.l., Waverly, N Y lb. 47 - —
tanks, Niagara Falls, N. Y lb. .43 - —
industrial grade, dms., c.l., Niagara Falls, N. Y lb. .305 - —
l.c.l., Waverly, N. Y lb. .325 - —
tanks, Niagara Falls, N. Y. lb. .29 - —
Wood (see Methanol).
Aldol, 95%, dms. works lb. .23 - —
denaturing grade, dms. gal. 2.15 - —
Aldrin, 60% solut., dms., c.l. works frt. alld lb. .538 - —
l.c.l., works, frt. alld lb. .755 - —
Aletris root, bgs. lb. 1.25 - 1.75
Algin (see Sodium alginate).
Allethrin, 100% dms., frt., alld lb 32 00 - —
90%, dms., frt. alld lb 28 80 - —
solution, 20%, dms. 100-lb. lots frt. alld lb. 6.55 - 7.55
2½%, dms., frt. alld gal. 6.00 - 6.50
Allspice (see Pimento).
Allyl bromide, cnys., works lb. 1.35 - 1.40
Chloride, dms., c.l., dlvd lb. .17 - —
l.c.l., dlvd. lb. .18 - —
tanks, dlvd lb. .15 - —
Starch, solid dms., works lb. .52¾- .54¼
solution, 40% toluol-butanol, dms., works lb. .25½- .26¼
Aloe, Cape, cs lb. .29 - .32
powdered, cs. lb. .38 - 45
Curacao, kgs. lb. .50 - .55
Socotrine, kgs. lb. No prices
Aloin, USP, bbls., dms., kgs lb. 3.75 - 4.64
Alphanaphthol, bbls., frt. alld lb. 1.00 - —
Alphanaphthylamine, bbls. frt. alld. lb. .50 - —
Alphanitronaphthalene, bbls., frt. alld lb. .41 - —
Alphapicoline ret. dms. c.l. works, frt. equald lb. .43½- —
l.c.l., works, frt. equald lb. .44 - —
Alphapinene, tanks, South, works gal. No prices.
Alphaterpineol, dms., l.c.l., dlvd E. lb 17 - —
Alphatocopherol, bots. kilo. 225.00 - —
Acetate, bots. kilo. 225.00 - —
Alum, ammonium, gran., bgs. works 100 lbs. 4.30 - —
lump, dms., works 100 lbs. 5.05 - —
powd., dms., works 100 lbs. 5.20 - —
USP, burnt dms lb. .20 - .21
hydrous, lms lb. 07¾- .08
Potassium, gran., bgs., works 100 lbs. 4.55 - —
lump, dms., works 100 lbs. 5.30 - —
powd., dms., works 100 lbs. 5.45 - —
USP, burnt dms lb. .20 - .21
hydrous dms lb. 07¾- .08
Potash-chrome, dms. lb. .17 - —
Sodium, dms., c.l. works 100 lbs. 4.60 - —
l.c.l., works 100 lbs. 5.00 - —
Alumina, calcined, bgs., c.l., works. lb. .0385- —
l.c.l., works lb. .0410- .0510
crystalline (see Aluminum oxide).
Aluminum acetate, basic solut., 24%, bbls., l.c.l. works lb. .14 - —
Chloride, com'l. anhyd. dms. c.l., works, frt. equald lb. .15 - —
l.c.l. works, frt equald. lb. .1550- —
cryst., dms., c.l., works lb. .1030- —
l.c.l., works lb. .1070- —
solution, 32° cbys., c.l., works. lb. .0369- —
l.c.l., works lb. .0435- .0960
tankcars, works 100 lbs. 2.80 - —
NF, gran., dms. works lb. .29 - .31
Fluoride, tech., anhyd., bgs., c.l., works lb. .1540- —
l.c.l., works lb. .1640- .1890
Aluminum fluoride, in fib. dms., 0.35c. per lb. higher.
Formate, basic solution, cbys. lb. .09½- —
l.c.l., works lb. .10 - —
Hydrate, heavy, bgs., c.l., frt. equald ton 60.00 - —
l.c.l., works ton 65.00 -85.00
light bgs. dlvd lb. .17 - —
Hydroxide, gel, pharmaceutical, 14-15% Al_2O_3, fib dms., works lb. .22 - —
contract, works lb. .21 - —
8-9½% Al_2O_3, fib dms., works lb. .19 - —
contract, works lb. .18 - —
dried, USP, XIV, fib., dms., works lb. .82½- —
contract, works lb. .79½- —
powder, tech (see Aluminum hydrate).
Laurate, precip., bbls lb. .44 - —
Metal, 99%+, ingots, 10,000-lb. lots, frt. alld lb. .21½- —
pigs, 10,000-lb. lots, frt. alld. lb. .20 - —
Oxide, amorphous (see Alumina, calcined).
Paste, lining, extra-fine, dms lb. .63½- —
standard, dms lb. .43 - —
Powder, lining, extra fine, dms lb. 1.02½- —
standard, dms lb. .72 - —

Aluminum powder and paste prices are f.o.b. shipping point. Add 1c per lb for 100-lb dm., 1½c per lb for 50-lb dm. 3c per lb for 10-lb can and 5c to 12c per lb for smaller containers. Deduct 1c per lb for single shipment of 400 to 1,499 lbs. 2c for 1,500 to 4,999 lbs., 3c for 5,000 to 29,999 lbs. and 4c for 30,000 lbs or more. Where destination is within the continental U. S. a deduction equivalent to the lowest available common carrier transportation rate will be made from seller's invoice on orders of 200 lbs or over.

Aluminum resinate, precip., dms., frt. alld lb. .27½- —
Stearate, dibasic, ctns., c.l. lb. .33 - —
l.c.l. lb. .34 - .37
monobasic, ctns., c.l. lb. .33 - —
l.c.l. lb. .34 - .37
tribasic, ctns., c.l. lb. .33 - —
l.c.l. lb. .34 - .37
Sulphate, com'l, bulk, c.l., works, 100 lbs. lb. 1.85 - —
ground, bgs., works ton. 37.00 - —
lump, bgs., works ton. 40.00 - —
iron-free, bgs., c.l., works, frt. equald 100 lbs. 3.55 - —
l.c.l., works, frt. equald 100 lbs. 3.95 - —
USP, gran., dms., works lb. .13 - .15
powd. dms. works lb. .14 - .16
Trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots oz. 8.00 -10.00
Ambrette seed, bgs lb. .65 .66
Aminoazotoluene, bbls lb. 1.03 - 1.18
Aminoethylethanolamine, dms., c.l., dlvd lb. .46½- —
l.c.l., dlvd lb. .47½- —
tanks, dlvd lb. .45 - —
Aminomethylpropanol, cns., dms., works lb. .60 - —
Amonophyllin, USP, 100-lb. dms. lb. 3.05 - —
Aminopyrine, USP, bots. dms lb. 6.00 6.15
Ammonia, anhydrous, fertilizer, tanks, works ton. 85.00 -88.00
pure, cycls, extra, zone 1 lb. .18½- —
2 lb. .19 - —
3 lb. .19½- .20
4 lb. .20 - —
5 lb. .21 - —
refrigeration tanks, works ton. 87.50 -90.50

Ammonia, aqua (29.4% NH_3), dms., c.l., dlvd., Met. area 100 lbs. 3.60 - —
l.c.l., works 100 lbs. 4.00 - —
tanks, works, anhyd. basis. ton. 96.00 - —
Ammoniac gum (see Gum, ammoniac).
Sal, gray, bgs., c.l., works, frt. equald 100 lbs. 8.25 - —
l.c.l., same basis 100 lbs. 8.65 -11.15
white gran. (see Ammonium chloride, tech.)
Ammoniacal liquor, tankcars, works, anhyd. basis ton. 96.00 - —
Ammonium acetate, purified, dms. lb. .38 - —
Benzoate, USP, dms. kgs. 4,000 lb lots frt. alld lb. .80 - —
smaller lots, frt. alld lb. .81 - 1.08
Biborate, bbls., c.l., works ton. 312.00 - —
ton lots, ex whse ton. 375.00 - —
smaller lots, ex whse ton. 380.00 - —
Bicarbonate, dom., dms., c.l., works lb. 6.50 - —
l.c.l., works lb. 7.50 - —
imported, dms., l.c.l lb. .07¼- .08½
Bichromate, bbls, works lb. .42 - .43
Bifluoride, dms., dlvd. lb. .2145- .2245
Bromide NF, gran. bbls lb .38 .39
dms. lb. .39 - 42
Powdered ammonium bromide 10c. per lb. higher
Carbonate, USP, lump, powd., dms lb. .23 .24
Chloride, tech., white granular, bgs., c.l., works 100 lbs. 5.25 - —
l.c.l., works 100 lbs. 7.00 - —
USP, gran., bbls., dms lb. .17¼- —
Citrate, dibasic, bbls lb. 75 - —
dms. lb. .80 .85
Fluoride (see Ammonium bifluoride).

Ammonium hydroxide (see Ammonia aqua).
Hypophosphite, NF, dms lb 2.40 —
Iodide, NF, dms., bots. lb. 4.26 - 4.38
Linoleate, 80%, dms., works lb. .50 .55
Nitrate, fertilizer grade, Canadian eastern, 33.5% N, bgs., c.l., shipping point ton 77.50 - —
western, 33.5% N., bgs., f.o.b. cars, Los Angeles ton. 89.84 - —
domestic, bgs., western, works. ton. 68.00 -70.00—
with dolomite 20.5% N, bgs. Hopewell, Va ton 51.00 —
Oxalate, fine gan., dms., lb 26½- 31
Pentaborate, gran., bbls., c.l., works ton. 222.00 - —
ton lots, ex whse ton 285.50 - —
smaller, lots, ex whse ton. 290.00 - —
Ammonium pentaborate powder $10 per ton higher
Perchlorate, kgs, works lb .50 .70
Persulphate, kgs lb. .38 —
Phosphate, com'l bgs, c.l. works, frt equald lb 08½ - —
l.c.l., same basis lb .09 - —
dibasic, NF V bbls, dms lb 45 —
tech., bgs, c.l. works, frt. equald lb 08½ - —
l.c.l. same basis lb .09 - —
Salicylate, NF, dms., kgs lb. 1.62 - 1.64
Silicofluoride, dms, works lb 11 12
Sulphamate, bbls, dms, works lb. .18 .20
Sulphate, coke-oven, bulk, producing ovens ton. 44.00 -47.00
synthetic, bgs, c.l. western works ton. 49.50 - —
bulk, works ton. 45.00 - —
purified, dms., works lb .08½- .10



As THE NEED for dependable petroleum-derived ethyl alcohol has become more and more urgent, Shell Chemical has expanded its distribution facilities.

Now, complete denaturing plants have been established in three key industrial centers, ready to make the fastest possible delivery to you in any quantity you may need . . . in drums, tank trucks, compartment trucks, tank cars or compartment tank cars.*

Shell Chemical's ethyl alcohol is of the highest quality, meeting or surpassing all Federal and commercial specifications for purity. It is available as pure alcohol (190 proof), in specially and completely denatured grades, and as the two proprietary solvents, Neosol® and Neosol A.

Your Shell Chemical representative will be glad to discuss your alcohol supply problem with you, at your convenience. You are invited to telephone or write.

*Tank truck and drum availability west of Rocky Mountains is limited.

SHELL CHEMICAL CORPORATION
CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE
Eastern Division: 500 Fifth Avenue, New York 36 • Western Division: 100 Bush Street, San Francisco 6
Atlanta • Boston • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • St. Louis
In Canada: Chemical Division, Shell Oil Company of Canada, Limited • Toronto • Montreal • Vancouver

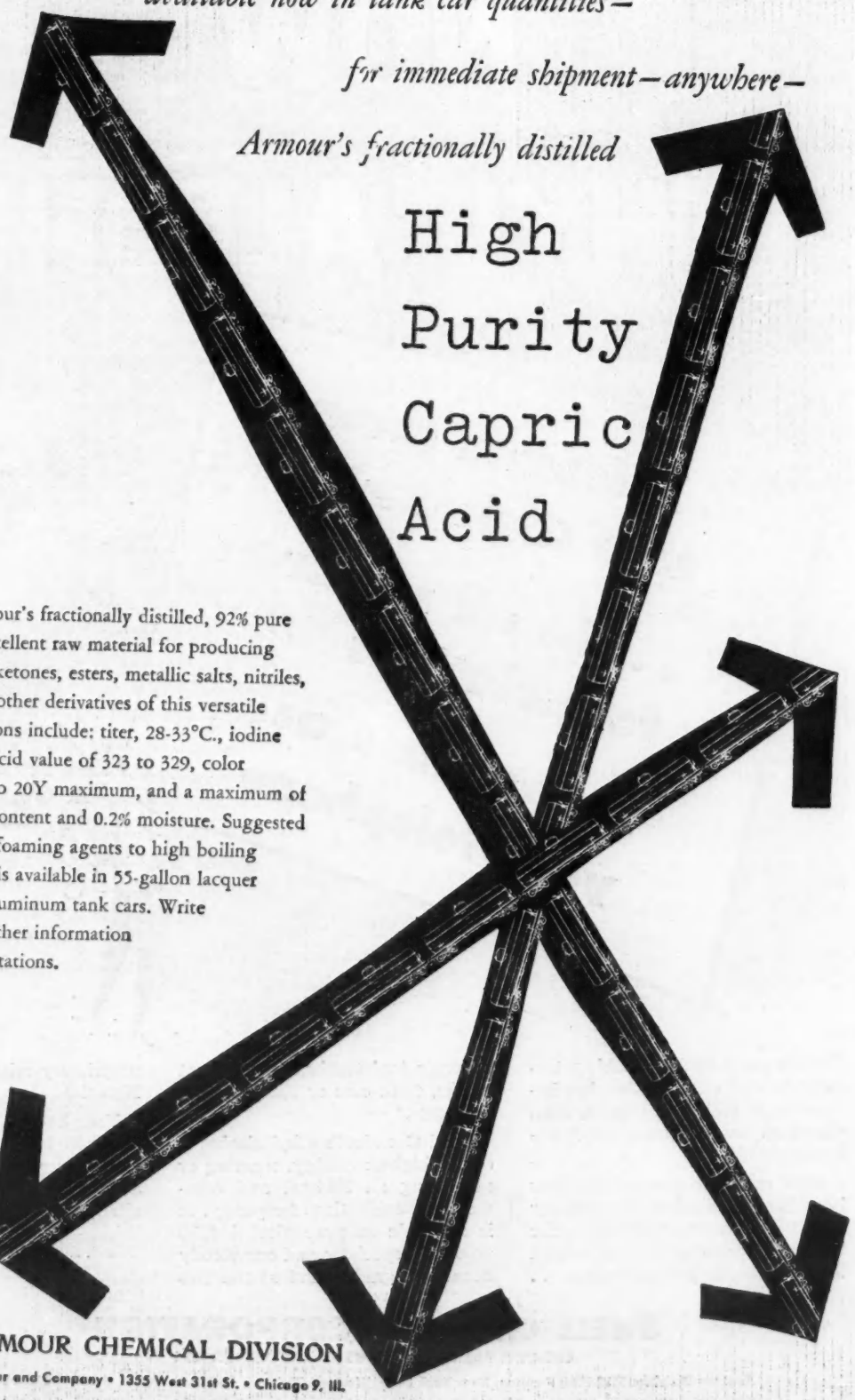
Ammonium Sulphide—BHC

Ammonium sulphide, liq., 40-44%, dms., c.l., frt. equald, basis 100% ton 240.00 - —
l.c.l., basis 100%, works. ton 300.00 - —
tanks, frt. alld ton 180.00 - —
Sulphocyanide, tech. (see Ammonium thiocyanate).
Thiocyanate, tech., dms., c.l., works lb. .18 - —
l.c.l., works lb. .20 - .23
Thioglycollate, com'l, cbys., basis 100% lb. 1.60 - —
highly purified, cbys., basis 100% lb. 1.70 - 1.96
Thiosulphate, cryst., photo grade, fib dms., frt. alld lb. .65 - —
60% solution, dms., c.l., works. lb. .06½- —
Amphetamine hydrochloride dibasic, dextro, bots lb 28.00 - —
dextro-laevo, dms lb 6.00 - —
monobasic, dextro, bots lb 28.00 - —
Phosphate, dibasic, dextro, bots. lb 28.00 - —
dextro-laevo, dms. lb 6.00 - —
Sulphate, dextro, dms lb 28.00 - —
dextro laevo, dms lb 6.00 - —
Amyl acetate ex fusel oil, tech., frt. alld. E. of Rockies lb. .17 - —
l.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
ex pentane dms. c.l. frt alld. E. of Rockies lb. .17 - —
l.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
Alcohol (see Alcohol, amyl).
Butyrate dms lb .90 1.05
Cinnamic aldehyde, dms lb 1.05 - 2.00
Nitrite, USP bots lb 1.75 - 1.83
Salicylate, cns., dms lb. .74 - 1.05
Anethol, NF, cns., dms lb. 1.25 - 1.37
Angelica root, dom., bls lb. .60 - .70
Anilin oil, dms., c.l., works, frt. alld. lb. .21 - —
l.c.l., works, frt. alld lb. .22 - —
tanks, works, frt. alld lb. .20 - —
Salt, dms., frt. alld lb. .33 - —
Anise, Balkan, bgs lb. No prices
Czech, bgs. lb. .25 Nom.
Mexican, bgs. lb. .17 Nom.
Spanish, bgs. lb. .22 Nom.
Turkish, bgs. lb. .16 Nom.
Anisic aldehyde, bots., dms lb. 2.00 - 2.70
Annatto seed, whole, bgs lb. .24 - —
powdered, dms lb. .28 - —
Anthracene, 80-85% bbls., ton-lots, works lb. .80 - —
smaller lots, works lb. .85 - —
Anthraquinone, 98.5%, bbls., frt. alld. lb. .88 - —
Antimony butter (see Antimony trichloride)
Metal, bulk, c.l., mines lb. .34½- —
cases, c.l., mines lb. .35 —
Oxide, bgs., c.l., frt. alld lb. .27½- .36
l.c.l., frt. alld lb. .29 - .39½
Sulphide, 62-64%, bgs, dlvd lb. .38 - .38½
Trichloride, pails, c.l., works lb .43 .47
l.c.l., works lb .45 .49
solution, cbys., works lb. .29 - .30
Antimony-potassium tartrate (see Tartar emetic).
Antipyrene, NF, dms lb. 2.50 3.60
Apomorphine hydrochloride, USP, bots oz. 23.40 -23.90
Areca nuts, powd., bbls lb. .15 - .16
Arecoline hydrobromide NF, bots tins oz 5.00 5.75
Arginine monohydrochloride, laevo dms., 1-kilo. lots kilo. 77.00 - —
Argols, min. 50%, bgs., shipment ports, per 100 kilos, basis 100% lb. No prices.
Arnica flowers (true montana), bls. lb. .70 - .71
root, bls lb. 1.45 - —
Arsenic metal, lump, bbls., prompt ship't. lb. .70 - —
Trioxide, USP dms lb. .48 - —
White, powd., bbls., c.l., dlvd lb. .05½- —
l.c.l. dlvd. lb. .06½- .07½
Asafetida, cs lb. .32 - .35
powd., bbls. dms lb. .50 - .53
Asbestine (see Talc, fibrous, N. Y.)
Asbestos, Canadian, crude, No. 1, c.l. (20 tons), mines ton 1,300.00- —
No. 2 c.l. (20 tons) mines ton 676.00 - —
Run-of-mine, c.l. (20 tons), mines ton 556.00 - —
3K, c.l., (20 tons), mines ton 436.00 - —
3R, c.l. (20 tons), mines ton 371.00 - —
3T, c.l. (20 tons), mines ton 348.00 - —
3Z, c.l. (20 tons), mines ton 321.00 - —
4K, c.l. (20 tons), mines ton 173.00 - —
4M, c.l (20 tons), mines ton 173.00 - —
4T, c.l. (20 tons), mines ton 156.00 - —
4Z, c.l. (20 tons), mines ton 156.00 - —
5D, c.l. (20 tons), mines ton 122.50 - —
5K, c.l. (20 tons), mines ton 122.50 - —
5M, c.l. (20 tons), mines ton 116.50 - —
5R, c.l. (20 tons), mines ton 110.00 - —
6D, c.l. (30 tons), mines ton 78.00 - —
7D, c.l., (30 tons) mines ton 68.50 - —
7F, c.l. (30 tons), mines ton 65.00 - —
7H, c.l. (30 tons), mines ton 55.00 - —
7K, c.l. (30 tons), mines ton 46.00 - —
7M, c.l. (30 tons) mines ton 40.00 - —
7R, c.l. (30 tons), mines ton 39.00 - —
7T, c.l. (30 tons), mines ton 37.00 - —
7RF, c.l. (30 tons), mines ton 40.00 - —
7TF c.l (30 tons) mines ton 40.00 - —
8S, c.l. (30 tons) mines ton 37.00 - —
Asbestos c.l. prices are in U. S. funds. L.c.l. lots, $4 per ton higher.

Asphalt, gilsonite, black, seconds, 300°-390°F. fusing point not uniform, bgs., c.l., Craig, Colo., Heber City, Utah ton 34.00 - —
select, 350° F. fusing point, bgs., c.l., same basis ton 38.00 - —
270°-295°F. fusing point, bgs., c.l., same basis ton 37.00 - —
let, bgs., c.l., same basis ton 34.00 - —
Manjak, No. 10, crude, dms., works lb. .06½- —
Petroleum, cut-back, tanks, tank-wagon, refinery gal. .09 - —
emulsion, tanks, tank-wagon refinery gal. .09½- .10
steam-refd., less than 80 penetration tanks, tankwagon refinery ton 22.00 - —
80-300 penetration, tanks, tank-wagon, refinery ton 21.00 - —
Aspirin (see Acid Acetylsalicylic.)
Atropine, USP, bots oz. 8.50 - 9.00
Sulphate, USP, bots oz. 4.50 5.00

B

Bacitracin, bulk, 1,000,000,000 or more units 50,000 units. .70 - —
less than 1,000,000,000 units 50,000 units. .75 —
Balm of Gilead buds dried, bgs lb 1.35 1.45
Barberry root bark, bags lb. .28 - .30
Barbital, USP, 100 lb. dms lb 5.00 —
Sodium, USP dms lb 5.25 5.27
Barium carbonate, precip., bgs., c.l., works ton 92.50 - —
smaller lots works ton 102.50 - —
Chlorate kgs., works lb. .32 - .36
Chloride, anhyd, bgs., c.l., works. ton 158.60 - —
l.c.l., works ton 168.00 - —
NF, cryst., dms lb. .18 - —
Chromate, bgs., frt. equald lb. .30 - —
Dioxide (see Barium peroxide)
Hydrate, crystals, bgs ton 190.00 -200.00
Iodide bots lb. 6.14 —
Monoxide (see Oxide).
Nitrate, bbls., c.l., works lb. .12½- —
l.c.l., works lb. .14 - —
Oxide, grd., dms., c.l., frt. equald. ton 255.00 - —
l.c.l., works ton 265.00 - —
Peroxide, dms. works lb 18 - —
Stearate, ctns., c.l., frt. alld. lb. .37 - —
l.c.l., same basis lb. .38 - .42
Sulphate tech. (see Barytes and Blanc fixe).
X-ray, dms lb. .14 - .14½
Sulphide, dms., c.l., works ton 85.00 - —
l.c.l., works ton 95.00 - —
Barytes, Southern off-color, bgs. mines ton 25.00 - —
95.75%, bgs., mines ton 25.00 - —
water-grd., paper bgs., c.l., E. St. Louis ton 41.60 - —
ex-whse., N. Y. ton 60.10 - —
Bauxite, bulk, mines ton 9.50 -10.00
Bay leaves (see Laurel leaves).
Belladonna leaf, bls lb. .28 - .32
root, bls lb. .45 - .50
Bentonite, dom., 200 mesh bgs., works ton 14.00 - —
imported, Italian, white, high gel., bgs., 10 tons to c.l., ex dock ton 65.90 - —
5 ton-lots, ex whse ton 80.60 - —
1 ton-lots, ex whse ton 83.10 - —
low gel, bgs., 10 tons to c.l., ex dock ton 64.40 - —
5 ton-lots, ex whse ton 76.95 - —
1 ton-lots, ex whse ton 81.45 - —
Benzal chloride, cbys., works lb .22 - .23½
Benzaldehyde, NF, dms lb. .74 - 1.05
tech., cbys., dms lb. .44 - —
Benzene (see Benzol).
Hexachloride, 99% gamma isomer (see Lindane).
tech., bgs., dms., c.l., works, gamma unit-lb. .0075- —
l.c.l., works, gamma unit-lb. .015 - —
dust, dry, distributors, dms., c.l., dlvd., gamma unit-lb. .013 - —
l.c.l., dlvd., gamma unit-lb. .014 - —
wet, distributors, dms., c.l., dlvd., gamma unit-lb. .02 - —
l.c.l., dlvd., gamma unit-lb. .021 - —
Benzidine hydrochloride, bbls., frt. alld., basis 100% lb. 1.00 - —
Benzocaine, dms lb. 3.48 - 3.50
Benzol, pure or nitration, tanks, works
Bethlehem, Pa gal. .42 - —
Birmingham district gal. .40 - —
Chicago district gal. .40 - —
Cleveland district gal. .40 - —
Geneva, Utah gal. .40 - —
Johnstown, Pa gal. .40 - —
Lackawanna, N. Y. gal. .42 - —
Lone star, Texas gal. .41 - —
Lorain, Ohio gal. .40 - —
Minnequa, Colo gal. .39 - —
Philadelphia district gal. .42 - —
Pittsburgh district gal. .40 - —
Sparrows Point, Md gal. .42 - —
Syracuse, N. Y. gal. .40 - —
Terre Haute, Ind gal. .41 - —
Youngstown, Ohio gal. .40 - —
Benzophenone dms lb. 1.40 1.70
Benzonitrile, dms., c.l., works lb. .46¾- —
l.c.l., works lb. .47 - —
Benzotrichloride, cbys., frt. equald. lb. .18 - .20
Benzoyl chloride, cbys., dms., c.l., works, frt. equald lb. .21½- .24½
l.c.l., same basis lb. .22½- .25½
Peroxide, pure, fib. ctns., works. lb 90 - 1.05
Benzyl acetate, f.f.c., cns., dms. lb. .62 - 1.04
Alcohol (see Alcohol, benzyl)
Benzoate, USP, f.f.c., cns., dms. lb. .62 - 1.10
Chloride, tech., cbys., dms., c.l., works, frt. equald lb. .20½- .23½
l.c.l., same basis lb. .21½- .24½
High grade benzyl chloride, 2c. higher.
Cinnamate, cns lb. 3.30 - 3.75
Formate, cns. lb. 1.30 - 2.10
Propionate, bots lb 1.35 - 1.80
Salicylate, bots. lb. 1.50 - 1.85
Benzylidinacetone, bots lb. 1.60 - 2.05
Benzylisoeugenol, cns. lb. 8.60 - 9.10
Berberine bisulphate, cns lb. 35.00 -36.25
Hydrochloride, bots lb. 35.00 -36.25
Betagammapicoline, 5°, dms., c.l., works lb. .31 - .32½
l.c.l., works lb. .32 - .33
Betamethylnaphthalene, 32°C m.p., dms., works lb. .90 - —
Betanaphthol, resublimed, dms., works lb. .78½- —
tech., bbls., c.l., works lb. .32½- —
l.c.l., works lb. .34½- —
Benzoate, fib dms., works lb 3.00 - —
custom contract lb. 1.65 - 1.85
Salicylate, dms lb 5.00 - —
Sulphate, cns lb. 35.00 -36.25
Betanaphthylamine, tech., bbls., works lb. 1.05 - 1.10
Betaphenylethylamine, dms., works, 1,000-lb. lots lb 1.10 —
smaller lots lb 1.15 1.40
BHC (see benzene hexachloride, technical).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When Diamond Alkali chlorinated solvents are delivered, customers *know* what they are getting, because they can see on every drum the famous red diamond that is a world-renowned emblem of *quality*—and the Tri-Sure* Closures which protect that quality from leakage, contamination and pilferage.

Diamond Alkali Company entrusts its fine products to Tri-Sure protection because shipment after shipment has proved that Tri-Sure equipped drums can be shipped anywhere, in any climate, under any conditions, with complete security.

Protect *your* drum shipments from losses—and deliver good will with every drum—by insisting on the exclusive Tri-Sure assembly of *Flange*, *Plug* and *Seal*. When you order drums, always specify "Tri-Sure Closures."

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*The Tri-Sure Trademark is a mark of reliability backed by over 30 years serving industry. It tells your customers that genuine Tri-Sure Flanges (inserted with genuine Tri-Sure dies), Plugs and Seals have been used.

AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

Tri-Sure Products Limited, St. Catharines, Ontario, Canada

Biotin—Calamine

Biotin cryst bots ..... gram 10.00 - —
Biphenyl (see Diphenyl).
Bismuth chloride, jars..... lb 5.11 - —
Hydroxide dms ..... lb 4.65 - —
Metal oxs ton lots ..... lb 2.25 - —
Nitrate, cryst., dms ..... lb 2.10 - —
Oxide, anhydrous dms ..... lb 4.47 5.05
Oxychloride dms ..... lb 4.37 4.42
Phenolsulphonate, fib dms.... lb 5.22 - —
Subcarbonate USP dms .... lb 3.70 - —
Subgallate, NF, fib, dms.....lb. 3.15 - —
Subiodide fib dms ..... lb 5.37 - —
Subnitrate NF dms ..... lb 2.65 - —
Subsalicylate USP dms..... lb 3.50 - —
Bismuth-ammonium citrate, USP powd. jars lb 4.22 - —
Black, acetylene, bgs., c.l., works.lb. .17 - —
cs., l.c.l., ship't point.....lb. .22½- .26
Bone dms. l.c.l. frt. alld lb 15½ .22
Pacific coast bone black prices, 2c. per lb higher
Carbon, channel, beads, bulk, c.l., works..lb. .07 - —
bgs. c.l., works lb. .0740- —
l.c.l., dlvd or whse lb .1225- —
uncompressed regular bgs. c.l., works lb. .12 - —
l.c.l., dlvd. or whse lb. .19 - —
furnace fast extruding bgs., c.l., works lb .06 - —
ctns l.c.l., whse lb .10 - —
high abrasion, bulk, c.l., works lb .0750- —
bgs c.l. works lb. .0790- —
l.c.l., dlvd. or whse lb. .122 .125
high modulus, bgs., c.l., works lb. .0550- —
ctns., l.c.l., whse ..... lb. .0950- —
semi reinforcing bgs., c.l., works lb. .045 - —
bgs., cns., l.c.l., whse...lb. .085 - —
Black, charcoal (see C).
Graphite (see G).
Iron oxide, pure, bgs., c.l., works. lb. .12¾- —
l.c.l., works ..... lb. .13 - —
Lamp, bgs., c.l., works.....lb. .16 - .45
Mineral bgs. works lb .01½0- .0675
Black ash (see Barium sulphide)
Blackberry root bark, bls..... lb. .50 - —
Black dyes (see Dyes).
Black haw root bark, bls .... lb .65 - .70
tree bark bls ..... lb. .40 - .42
Blanc fixe dry by product bgs. c.l., works...ton.155.00 - —
l.c.l., works.....ton.165.00 - —
direct process bgs. c.l., works ton.100.00 - —
l.c.l., works ..... ton.110.00 - —
N. Y whse ton.140.88 155.00
pulp, 70%, bbls., c.l., works ..ton.105.00 - —
l.c.l., works.....ton.115.00 - —
Bleaching powder dms., c.l., works 100 lbs 5.02 - —
l.c.l., works ..... 100 lbs. 6.52 - —
Blood, dried, 16-16½% ammo., bgs. unit-ton. 6.75 - —
high-grade unground, 16-17% ammon., bgs., Chicago unit-ton. 6.75 - —
soluble bgs., c.l ..... lb .16½- .18
l.c.l. ..... lb. .17½- .25
Bloodroot, bls ..... lb. .60 - .65
Blue alkali dry bbls dlvd N or Tenn and N C., E of Miss R. including St Paul Minneapolis, Davenport Rock Island, St. Louis lb 2.00 - —
toner bbls. litho flushed same basis lb 1.15 - —
Blue, Chinese, bbls., same basis..lb. .48 - —
Cobalt, genuine, bbls., same basis. lb. 4.90 - —
imitation (see Blue, ultramarine).
Copper-phthalocyanine, full strength, bbls., same basis lb 3.85 - —
resinated, bbls. same basis lb 3.40 - —
water dispersable lb. 1.54 - —
Iron (see Blue, Chinese, Milori, Potash, Prussian and Soda).
Methyl violet toner, molybdated, PMA, bbls., same basis..lb. 2.60 - —
tungstated, PTMA, bbls., same basis .lb. 4.05 - —
Milori, bbls., same basis..... lb. .48 - —
Peacock, fugitive 100% color strength, bbls., same basis lb. .75 - —
Potash, CP, bbls., same basis lb. .56 - —
Prussian, insoluble, bbls., same basis..lb. .48 - —
soluble, bbls., same basis ..lb. .48 - —
Soda, CP, bronze, bbls., same basis..lb. .56 - —
Ultramarine, cobalt type, dry or pulp, bbls., same basis lb. .30½- .35
jobbing types, bbls., same basis. lb. .16½- .18½
regular types, dry bbls. same basis lb. .22½- .35
Victoria toner, molybdic, PMA, bbls lb. 4.10 - —
tungstated, PTMA bbls .lb. 5.35 - —

Blue dry colors, dlvd prices 1¼c higher Ala., Fla., Ga., La. (Shreveport, 1¼c.), Miss., N C., S C., Tenn. Tex (El Paso 2c.) Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph 1 6c higher Pac Coast Denver Pueblo, Salt Lake City Wichita frt. equalized with Chicago

Blue dyes (see Dyes, blue).
Bluestone (see Copper sulphate).
Blue vitriol (see Copper sulphate).
Bonemeal steamed, works, E..ton.55.00 - —
Bone phosphate, defluorinated (see D).
of lime (see Calcium phosphate, tribasic)
precipitate, (see Calcium phosphate tribasic, NF, precip.).
Bones, raw bulk Atlantic ports ton.60.00 - —
Borax, tech, anhydrous, bgs., c.l., works ton.78.00 - —
ton lots ex whse, N. Y. or chi ton.125.75- —
smaller lots, same basis. ton.130.75- —
bulk, c.l., works..... ton.70.00 - —
crystals, 99%, bgs., c.l., works. ton.67.25 - —
ton lots, ex-whse., N. Y. or Chi ton.115.00 - —
smaller lots, same basis. ton.120.00 - —
bbls., c.l., works ..... ton.91.75 - —
ton lots, ex-whse., N. Y. or Chi ton.139.50 - —
smaller lots, same basis. ton.144.50 - —
gran., 99½%, bgs., c.l., works. ton.41.25 - —
smaller lots, same basis. ton.89.00 - —
ton lots, ex whse., N. Y. Chi ton.94.00 - —
bbls., c.l., works ..... ton.65.75 - —
ton lots, ex-whse., N. Y. or Chi ton.113.50 - —
smaller lots, same basis. ton.118.50 - —
bulk, c.l., works.....ton.35.75 - —
powder, 99½%, bgs., c.l., works ton.42.25 - —
ton lots, ex-whse., N. Y. or Chi. ton.94.00 - —
smaller lots, same basis. ton.99.00 - —
bbls., c.l., works.....ton.70.75 - —
ton lots, ex-whse., N. Y. or Chi. ton.118.50 - —
smaller lots, same basis. ton.123.50 - —

Borax packed in kgs., $45.50 per ton higher than in paper bgs. USP borax $15 per ton higher.

Bordeaux mixture, bgs., c.l., works, frt. alld. or nearest whse. point lb. .18 - .24
l.c.l., same basis..... lb. .19 - .26
Borneol, cns ..... lb. 2.85 - 4.50
Borontrifluoride gas, cyls., truckload, works lb. .62 - —
less truckload, works lb. .70 - —
Brazilwood extract (see Hypernic extract).
Brimstone (see Sulphur).
Bromine, purified, cs., c.l., dlvd. E. of Rockies lb. .27 - —
l.c.l., up to 1,000-lb. lots, same basis. lb. .29 - —
dms., lead-lined, dlvd..... lb. .34 - —
Bromoform, pharmaceutical grade, bots lb. 1.62 - 2.60
cbys. ..... lb. 1.52 - —
Bromstyrol bots..... lb. 5.40 - 5.70
Bronze powder aluminum (See A).
Gold, litho, cns., dms., works, lb. .75 - .85
moulding, cns., dms., works.lb. .85 - 1.00
printing ink, cns., dms., works lb. 1.05 - 1.25
radiator, cns., dms., works lb. .80 - .85
Brown, iron oxide, pure, bgs., c.l., works lb. .13¾- —
l.c.l., works..... lb. .14 - —
Oxide, metallic, bgs., works....lb. .04 - —
Sap, crystals, bgs., works.....lb. .12 - —
powdered bgs ..... lb. .13 - —
Sienna, burnt, paper bgs., c.l., works..lb. .04¼- .15¼
l.c.l., works ..... lb. .04½- .15½
raw, paper, bgs., c.l., works lb. .04½- .13
l.c.l., works..... lb. .04¾- .13¼
Umber, burnt, American, bgs., c.l., works lb. .06 - —
l.c.l., works ..... lb. .06¼- .07
Turkey type, bgs., c.l., Boston, Bethlehem Easton, Pa., Hiwassee, Va., N. Y...lb. .06¾- —
l.c.l., works..... lb. .07 - —
raw, American, bgs., works lb. .06¼- .06¼
Turkey-type, bgs., works..lb. .06¾- .07
Vandyke bbls., works..... lb. .09½- .12
Brucine, cns., 100-oz. lots.....oz. .20 - .35
Sulphate NF, cns., 100-oz. lots.oz. .15 - .30
Buchu leaves, bls. ..... lb. .45 - —
Butadiene, refined, cyls., refinery.lb. .22 - —
tanks, refinery..... lb. .15 - —
Butane, indust., tanks, group 3..gal. .04 - —
Butyl acetate, fermentation, normal, dms., c.l., frt. alld..lb. .15 - —
l.c.l., same basis..... lb. .16 - —
tanks, same basis..... lb. .13 - —
synthetic, normal, dms., c.l., dlvd. E..lb. .15 - —
l.c.l., same basis..... lb. .16 - —
tanks, same basis ..... lb. .13 - —
secondary, dms., c.l., dlvd. E. lb. .12½- —
l.c.l., same basis..... lb. .13¼- —
tanks, same basis..... lb. .10¾- —
Alcohol (see Alcohol butyl).
Aldehyde, dms., c.l., dlvd..... lb. .21¼- —
l.c.l., dlvd. ..... lb. .22¼- —
tanks, dlvd. ..... lb. .19½- —
Chloride, dms., c.l., works..... lb. .37½- —
l.c.l., works ..... lb. .38 - —
Ether (see Ether butyl).
Lactate, dms., c.l., frt. alld. E. of Rockies..lb. .35 - —
l.c.l., same basis..... lb. .36 - —
tanks, same basis..... lb. .33 - —
Laurate, dms. works..... lb. .39 - —
Methacrylate normal, dms., less truckloads, works..... lb. .70 - —
Oleate, refd., dms., l.c.l., works.lb. .32 - —
Phenylacetate, dms ..... lb. 4.50 - 4.60
Phthalate (see Dibutyl phthalate).
Stearate, dms., l.c.l., frt. equald lb. .34 - .37½
Butylamine (see Mono., Di- or Tri-).
Butyric ether (see Ethyl butyrate).

C

Cacao butter (see Cocoa butter)
Cadmium iodide, jars ..... lb. 6.75 - 7.05
Metal ingots or sticks, cs., dlvd. lb 2.00 - —
Stearate, dms., ton lots.....lb. 1.42 - —
smaller lots ..... lb. 1.44 - —
Caffeine, natural, USP, cryst., dms., 100 lb lots or more lb. 2.80 - —
anhydrous, dms.....lb. 3.00 - —
synthetic, USP, cryst., dms., 100 lb. lots or more lb. 2.80 - —
anhydrous, dms., 100 lbs. or more lb. 3.00 - —
Citrated, USP, dms., 100 lb. lots or more..lb. 2.65 - —
Calamine, USP, dms.....lb. .34 - —

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THREE ELEPHANT* PRODUCTS

Borax, Technical (coarse, fine granular and powdered)
Boric Acid, Technical and U.S.P.
Pentahydrate Borax (refined)
PYROBOR* Dehydrated Borax

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Sulphate of Potash	Fumigants
Salt Cake	Herbicides
Desiccated Sodium Sulphate	Insecticides
Soda Ash	Organic Bromides
Sodium Pentaborate	Refrigerants
	Sulphur Dioxide

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BORAX with its fluxing ability, antiseptic properties and alkaline nature, finds innumerable uses from the glaze on dinnerware to the vitreous enamel on refrigerators, stoves and kitchen ware. It plays an important part in the production of heat resistant glassware where tough and durable qualities are essential.

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American Potash & Chemical Corporation

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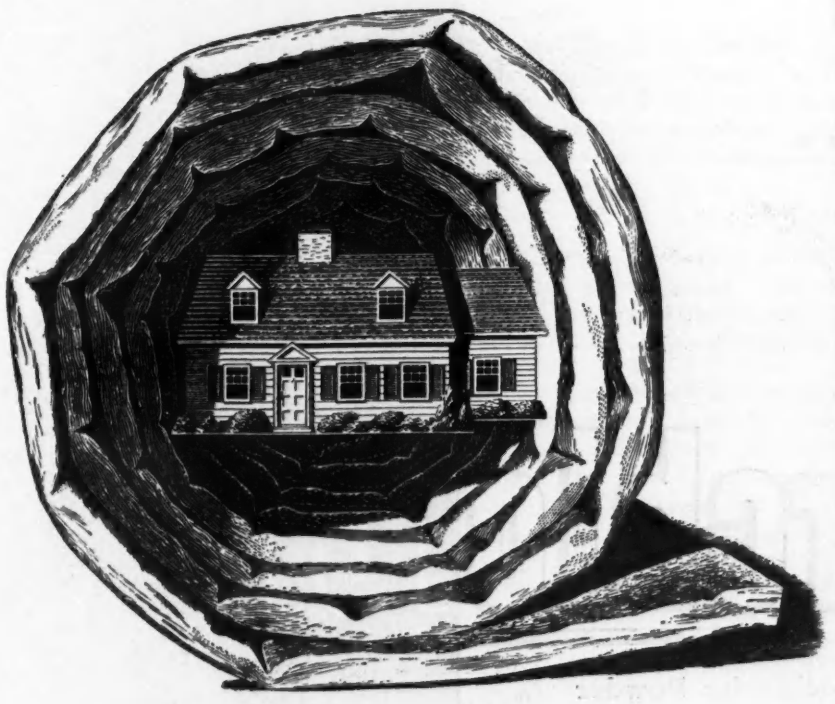
122 East 42nd Street, New York 17, N. Y.
• ESTON CHEMICALS DIVISION
3100 East 26th Street, Los Angeles 23, California
Plants• Trona and Los Angeles, California

Calciferol, cryst., vials, 1 kilo lots, works	gram	.89	—
25 to 100 gram lots, works	gram	.90	.93
in edible oil dms., 10,000 or more standard units (1 standard unit equals 1,000,000 USP units), works	unit	.04¾	—
1,000 to 10,000 standard units, works	unit	.05¼	—
less than 1,000 standard units, works	unit	.05¾	—
Calcium arsenate, dealers, dms., c.l., whse. works, frt. alld. on 96 lbs. or over	lb.	.09	.10
l.c.l., same basis	lb.	.10	.11
Bromide, NF, jars	lb.	.92	.94
Carbide, standard generator size, dms., c.l., dlvd.	ton	134.40	—
Carbonate, natural, dry-grd., air floated, 99.5%—325 mesh, bgs., c.l., works	ton.	7.50	-10.00
chalk, whiting, 325 mesh, bgs., works	ton.	32.00	-34.00
water-grd., ½ to 10 microns, bgs., c.l., works	ton.	30.00	—
10 to 20 microns, bgs., c.l., works	ton.	17.00	-18.00
precipitated, dense, bgs., c.l., works	ton	30.00	-33.00
l.c.l., works	ton.	40.00	-48.00
medium, bgs., c.l., works	ton.	35.00	—
l.c.l., works	ton.	45.00	-50.00
surface treated, bgs., c.l., works	ton.	35.00	-50.00
l.c.l., works	ton.	45.00	-65.00
ultrafine, bgs., c.l., works	ton.	110.00	160.00
l.c.l., works	ton.	120.00	-175.00
Chloride, cryst., purified, dms	lb.	.27	—
flake 77-80%, paper bgs., c.l. works, frt. equald	ton.	27.00	—
liquor 40%, tankcars works frt. alld.	ton.	11.50	—
pellets, bgs., c.l., works	ton.	33.00	—
powder, bgs., c.l., works	ton.	37.65	—
solid, 73-75%, dms c.l., frt equald	ton.	25.50	—
l.c.l., works, same basis	ton.	34.00	-71.00
USP, gran., dms	lb.	.40	—
Chromate bgs., frt. equald	lb	29½	.30
Cyanide, dms. dlvd. E. of Rockies.	lb.	.24	.50
Gluconate, AA, bbls., dms	lb.	.70	.72
USP, bbls., dms	lb.	.63	.65
Glycerophosphate, NF, fib. dms.	lb.	2.30	2.45
Hydride, dms., works	lb	2.20	4.00
Hypochlorite, high test, cased (45 lbs.), dlvd. E. of Rockies	cs.	22.60	-24.75
dms., 100-lb., same basis	dm.	28.65	-32.50
Hypophosphite, dms., ton lots or less	lb	90	.93
Iodide, jars	lb	4.52	—
Lactate USP, dms., 10,000-lb. lots or more, works	lb.	40	—
smaller lots, works	lb.	.41	.48
Mandelate, USP, dms., works	lb	2.10	2.25
Naphthenate, liq., 4% Ca, dms., frt. equald	lb.	.27¼	—
Nitrate, tech., bbls., works	lb.	.13	—
fertilizer grade, bgs., c.l., Los Angeles	ton.	48.00	—
Pantothenate, dextro, jars, 100 gram lots or more, frt. adjusted	gram.	.07½	—
Para-aminosalicylate, fib. dms., 1,000-lb. lots or more, frt. adjusted	lb.	7.00	—
smaller lots, same basis	lb.	7.05	7.30
Phenolsulphonate, dms	lb	70	—
Phosphate, dibasic, USP, bgs., c.l., works	100 lbs.	7.10	—
l.c.l.	100 lbs.	7.60	7.95
feed grade, bgs., c.l., works	ton.	80.00	-90.00
l.c.l., bgs., works	ton.	85.00	-95.00
monobasic, bgs., 10,000-lb. lots, works frt. equald	lb.	6.40	—
smaller lots, same basis	lb.	6.90	—
tribasic, precip., NF, bgs., c.l., works	100 lbs.	7.60	—
l.c.l., works	100 lbs.	7.95	—
Phytate, bgs., works	lb.	.37	—
Resinate, precip., dms., frt. alld., works	lb.	.27¾	—
Silicate, hydrated, bgs., c.l., works.	lb.	.06	—
l.c.l., works	lb.	.06½	—
Stearate, ctns., c.l.	lb.	.35	—
l.c.l.	lb.	.36	.40
Sulphate (see Gypsum)			
Calcium-strontium sulphide, phosphorescent steel pails, 100 to 999 lb. lots, works	lb.	2.60	3.50
fine particle size, same basis, works	lb	2.63	3.75
Calomel, USP powd. dms	lb.	4.02	4.05
Camphene, 46° m.p., dms. incl., c.l., works	lb.	.1930	—
l.c.l., same basis	lb	.1980	.2115
tanks, same basis	lb	1660	—
Chlorinated, 67-69% (see Toxaphene).			
Camphor monobromated, NF, dms., kgs	lb.	3.00	3.12
natural, USP, powd., bbls., 100-lb. lots	lb.	.48	.50
tablets, 1-oz., ½ oz. cs	lb.	.63	.65
Camphor, synthetic, tech., bbls., 10 bbls., 1,500-lb. lots	lb.	.55½	—
smaller lots	lb.	.56	.66
USP gran. powd. bbls. 2,000-lb. lots	lb.	.57	—
1,000-lb. lots	lb.	.58	—
smaller lots	lb.	.59	—
tablets, tins, 2,000-lb. lots	lb.	.90	—
1,000-lb. lots	lb.	.91	—
smaller lots	lb.	.92	—
Canada balsam (see Fir balsam).			
Cantharides, Chinese, cs	lb	2.00	2.05
powd., bxs.	lb	2.25	2.30
Russian, bgs.	lb	4.00	4.05
powd., bxs.	lb	4.35	4.40
Capsicum (see Pepper, red).			
Oleoresin, NF from domestic pepper, dms.	lb.	4.00	5.50
from African pepper, dms	lb.	4.75	6.25
Caramel coloring, NF, bbls	gal.	1.05	1.20
Caraway seed, Dutch, bgs.	lb.	.11	.11½
Carbazole, 97%, bbls., ton lots, works	lb.	1.05	—
Carbinol, methylisobutyl, dms., c.l., dlvd.	lb.	.15	—
l.c.l., same basis	lb.	.16	—
tanks, same basis	lb.	.13	—
Carbon bisulphide, 55 gal. dms., c.l., works, frt. alld. competitive points	lb.	.0750	—
l.c.l., same basis	lb.	.0850	—
5-gal. dms., c.l., same basis	lb.	.1025	—
l.c.l., same basis	lb.	.1125	—
tankcars same basis	lb.	.0525	—
Dioxide, industrial, wholesale, c.l.	lb.	.08	—
Tetrachloride CP, dms., works	lb.	.11	.13¾
NF, chys	lb.	.17	.18
tech., dms., c.l., E. of Rockies, frt. alld.	lb.	.0925	—
W. of Rockies, f.o.b. stock-points	lb.	.0975	—
l.c.l., E. of Rockies, frt. alld. alld	lb.	.115	—
W. of Rockies, f.o.b. stock-points	lb.	.12	—
tanks E. of Rockies, frt. alld.	lb.	.0825	—
W. of Rockies, f.o.b. stock-points	lb.	.0875	—
Carboxymethyl cellulose (see CMC).			
Carbromal, NF, dms., 100-lb. lots, works	lb.	4.00	4.25
smaller lots, works	lb.	4.10	4.75
Cardamom fruit, fancy, bleached, A, cs.	lb.	3.10	—
medium, cs.	lb.	2.80	—
decorticated, Alleppey, cs.	lb.	1.70	—
Guatemalan, cs.	lb.	1.68	—
Mangalore type, cs.	lb.	1.95	Nom.
green, Alleppey, bgs.	lb.	1.30	—
Ceylon, bgs.	lb.	1.30	—
seed (see Cardamom fruit decorticated).			
Carmine, No. 40, NF, bulk, 100 lb. lots or more, dlvd.	lb.	6.50	—
smaller lots, dlvd.	lb.	6.65	7.15
Carotene, technical, 1,350,000 A units per gram, tins, works	gm.	.55	—
in carrot oil 5,000,000 to 8,000,000 A units per lb., dms., works, million units		.18	—
microcrystalline in oil 400,000 A units per gram, tins, works, million units		.33	—
Carvol, bots.	lb.	4.75	9.65
Cascara sagrada bark, bulk	lb.	.32	.34
Casein, dom. acid-precip. standard, bgs. 10,000-lb. lots or more, ship't. point	lb.	.28	.32
premium bgs. 10,000-lb. lots or more, ship't. point	lb.	.35	40
imported, Argentine acid-precip., grd., 100-bg. lots or more, duty paid	lb.	.21¾	.22½
Cashewnut shell liquid, treated dms., c.l., Newark, N. J.	lb.	.22	—
ton lots, same basis	lb.	.23	—
dm. lots, same basis	lb.	.25	—
Cassia, Batavia, cuttings, bls.	lb.	.15½	—
longstick, broker	lb.	.17½	—
shortstick, broker	lb.	.16½	—
Saigon, broken, bls.	lb.	.60	—
medium, bls.	lb.	.65	—
thin, bls.	lb.	No Prices	
Castor beans, bgs., f.o.b. Brazilian ports	long ton.	118.00	—
Oil (see Oil, castor)			
Pomace, bgs., c.l., works	ton.	25.00	—
Castoreum, artificial, ens.	lb.	9.00	—
natural, ens.	lb.	5.00	-30.00
Catechol, CP, cryst., fib. dms., works	lb	2.17½	—
resublimed dms., works	lb.	4.29½	—
Catnip leaves, Southern, bls.	lb.	.75	—
Celery seed, French, bgs.	lb.	.44	—
Indian, bgs.	lb.	.21	—
Celluloid scrap (see Pyroxylin scrap).			
Cellulose acetate, flake, ctns., dlvd.	lb.	.40	.43
extrusion compounds, translucent metallic pearls, special black dms., c.l., same basis	lb.	.52	—
l.c.l. same basis	lb.	.53	.59
molding, composition, translucent, metallic pearls, special black, dms., c.l., frt. alld.	lb.	.48	—
l.c.l. same basis	lb.	.49	.55
reprocessed black, dms., l.c.l. same basis	lb.	.43	.49
Acetate-butyrate flake, 17% butyryl content, standard cartons, works	lb.	.54	—
27% butyryl content standard cartons works	lb.	.64	—
38% butyryl content, standard cartons, works	lb.	.54	—
Cellulose acetate-butyrate, flake, 50% butyryl content, standard cartons, works	lb.	.63	—
molding composition, plain colors, pearls, transparents, special black, dms., l.c.l., frt. alld.	lb.	.64	.71
reprocessed, black, dms., l.c.l., same basis	lb.	.52	.53
Triacetate, flake, ctns., works, frt. alld. or 100-lb. lots or more	lb.	.50	—
Cerium hydrate, 74% CeO_2, fib. dms., 100-lb. lots or more	lb.	1.44	—
77% CeO_2, fib. dms., 100-lb. lots or more	lb.	1.74	—
Oxalate, NF, bbls. bgs., works	lb.	1.65	—
Oxide, optical grade, bgs. 50-lb lots or more, works	lb.	1.85	1.98
smaller lots, works	lb.	2.03	2.23
Chalk (see calcium carbonate).			
Chamomile flowers, Hungarian style, cs	lb.	.90	1.00
Roman, cs	lb	1.00	1.15
Charcoal, activated NF, fib. dms., c.l., works	lb	.25	.32
5-ton lots, works	lb.	.26½	.32½
smaller lots, works	lb	.27	.50
Bone (see Black, bone).			
Hardwood, briquets, bgs., c.l., works	ton.	77.00	88.00
granular, bgs., works	ton.	77.00	—
bulk, c.l., works	ton.	70.40	—
Pinewood, gran., powd., bgs., c.l., works, south	ton.	53.50	—
l.c.l., works, South	ton.	53.50	-63.50
lump bgs., c.l., works, South	ton.	50.00	—
l.c.l., works, South	ton.	53.00	-67.50
bulk, c.l., works, South	ton	33.50	—



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Uses of RCI Products

CANVAS, PAPER AND GLASS CLOTH LAMINATES: PLYOPHEN cresol, phenolic and resorcinol-formaldehyde resins and varnishes; RCI polyester resins.

CARBON PAPER: RCI inorganic chemical pigment colors.

CASTINGS: FOUNDREZ powdered phenolic resins (for the shell molding process); FOUNDREZ liquid phenolic resins and FOUNDREZ core oils (for core binders).

FURNITURE, PLYWOOD, FLOORING, HARDBOARD AND CHIPBOARD: HYDROPHEN phenolic glues; PLYACIEN protein glues; PLYAMINE urea-formaldehyde glues; PLYOPHEN phenolic and resorcinol-formaldehyde glues.

LEATHER: BECKOSOL alkyd resins (for leather finishes); PLYOPHEN resorcinol-formaldehyde resins, SUPER-BECKACITE pure phenolic resins, SYNTHE-COPAL ester gums (for leather adhesives).

LINOLEUM: BECKOSOL alkyd resins and PENTACITE pentaerythritol resins (for linoleum coatings); RCI inorganic chemical pigment colors.

PAINTS, VARNISHES AND LACQUERS: BECKACITE (1) fumaric, (2) maleic and (3) modified phenolic resins; BECKAMINE urea-formaldehyde resins; BECKOLIN synthetic oils; BECKOPOL modified phenolic resins; BECKOSOL (1) phenolated, (2) phthalic-free, (3) rosin modified, (4) pure drying and (5) pure non-drying alkyd resins; KOPOL processed Congo copals; PENTACITE pentaerythritol resins; STYRESOL styrenated alkyd resins; SUPER-BECKACITE pure phenolic resins; SYNTHE-COPAL ester gums; WALLKYD pure drying alkyd resins (for alkyd flat wall vehicles); WALLPOL vinyl-type copolymer latex emulsions (for latex flat wall coatings); RCI inorganic chemical pigment colors.

PAPER: BECKAMINE urea-formaldehyde resins (for adding wet strength, improving the wet rub of starch-clay coatings, and waterproofing starch adhesives); RCI inorganic chemical pigment colors (for paper coloring); STYRESOL styrenated alkyd resins (for paper coating).

PRINTING INKS: BECKACITE fumaric, maleic and modified phenolic resins; BECKOLIN synthetic oils; BECKOPOL modified phenolic resins; RCI inorganic chemical pigment colors.

TYPEWRITER RIBBONS: RCI inorganic chemical pigment colors.

WAXES AND POLISHES: BECKACITE modified phenolic and maleic resins; SUPER-BECKACITE pure phenolic resins; SYNTHE-COPAL ester gums.

RCI

Chestnut Extract—Corn Syrup

Chestnut extract, liquid, 25% tannin, bbls., c.l., works lb. .0530- —
l.c.l., works lb. .0565- —
tanks, works lb. .0440- —
powd., 60% tannin, bgs., extra, c.l., works lb. .1128- —
l.c.l., works lb. .1200- —
Chloral, tech., 94% min., dms., c.l. works lb. .23 - —
l.c.l., works lb. .24 - —
tanks, works lb. .21 - —
Hydrate, USP, 40-lb. jars, 1,000-lb. lots lb. 1.30 - —
500-lb lots lb 1.33 - —
100 lb lots or less lb 1.35 - 1.40
Chloramine T, NF, bbls., works lb. .75 - 1.00
Chlordane, agricultural, dms., pails, c.l., frt. alld lb. .65 - —
l.c.l., frt. alld lb. .66 - .73
refined, dms., c.l., frt. alld lb. .75 - —
l.c.l., frt. alld lb. .76 - .83
Chlorinated paraffin, 42%, dms., c.l., frt. alld lb. .15½- —
l.c.l., same basis lb. .16½- —
70%, dms., c.l., same basis lb. .18 - —
l.c.l., same basis lb. .19 - —
Rubber, 5, 10, 20 cpts., ctns., c.l., works lb. .55 - —
l.c.l., works lb. .57 - —
125, 1,000 cps., ctns., c.l., works lb. .60 - —
l.c.l., works lb. .61 - .62
Chlorine, liquid, cyls., c.l., works, frt. equald lb. .0625- .1125
l.c.l., N. Y. stock points lb. .1025- —
tanks, single units, works, frt. equald 100 lbs. 2.53 - —

Chlorine, liquid, tanks, multiple units, 5 cars, works, frt. equald, 100 lbs. 3.80 - 3.83
3 cars, same basis 100 lbs. 3.80 - —
2 cars, same basis 100 lbs. 5.00 - —
1 car, same basis 100 lbs. 6.00 - —
Chloroform, tech., dms., c.l., dlvd. E lb. .18 - .182
l.c.l., same basis lb. .193 - .20
tanks, same basis lb. .17 - .171
USP, dms lb. .30 - .35
Chloro (4), —2 amino-toluene, bbls lb. 1.38 - —
Chlorophyll, oil soluble, 4%, not fixed, tins, pails, works lb. 4.25 - —
copper fixed, 6½% tins, pails, works lb 4.25 - —
Sodium-copper, aqueous solut., 4% dms., pails, works lb. 3.75 - —
8%, pails, dms., works lb. 4.00 - 4.80
14%, dms., works lb. 8.90 - —
concentrated, dom., 50%, dms., works, basis 100% lb.55.00 -60.00
75%, dms., works, basis 100% lb.45.00 -60.00
90%-100%, dms., works, basis 100% lb.45.00 -60.00
imported .60%, tins, basis 100% lb.58.00 - —
90%, tins, basis 100% lb.58.00 - —
75%, tins, basis 100% lb.58.00 - —
Chloropicrin, com'l, bots. lb. 1.50 - —
cyls., 180 lbs. frt alld lb .95 - —
100 lbs. same basis lb .97 - —
25 lbs., same basis lb 1.22 - —
Cholesterol, USP, 6b dms. 100-lb. lots lb. 6.85 - —
Choline bitartrate, fib dms., frt. adjusted lb. 1.50 - 1.75
Chloride, fib, dms., frt. adjusted. lb. 1.50 - 1.75
Dihydrogen citrate, fib, dms., frt. adjusted lb. 1.50 - 1.75

Chromium acetate, powd., 72% Cr., bbls., works lb. No stocks.
solut., 7½% bbls., works lb. .08½ —
cbys., works lb. .10¼- —
8½%, bbls., works lb. .09 - —
cbys., works lb. .10¾- —
Fluoride, bbls., works lb. .51 - .53
Green (see Green, chromel).
Oxide (see Green, chromium oxide)
Oleate, solid, bbls lb. .49 - —
Trioxide, NF, bots lb. .83 - .89
Yellow, (see Yellow, chrome).
Chrysarobin, USP, bots. lb 6.50 - 8.00
Cinchona bark, NF, red, broken, bgs lb. .28 - .30
yellow, broken, bgs lb. .29 - .30
Cinchonidine, cryst., cns, 100-oz. lots, oz. .65 - —
Sulphate, cns., 100-oz. lots oz. .37 - .40½
Cinchonine cryst., cns., 100-oz. lots, oz. .52 - .57
Sulphate, NF, cns., 100-oz. lots oz. .27½- .30½
Cinchophen, NF, heavy density, dms., frt. adjusted lb. 3.70 - 4.05
standard density, dms., same basis lb. 3.50 - 3.85
Cinchophen-sodium, dms., frt. adjusted lb. 4.50 - 4.85
Cinnamic alcohol (see Alcohol cinnamic).
Aldehyde, NF, cns., dms lb. 1.00 - 1.30
Cinnamon, Ceylon, No. 2, bls. lb. .39 - .40
"0000," bgs. lb. .47 - —
Citral, bots., cns lb. 3.00 - 3.75
Citronellal, bots., dms lb. 1.50 - 2.00
Citronellol, bots., dms lb. 1.70 - 2.20
Civet, artificial, bots lb 13.75 -15.00
natural, bots oz. 7.50 -15.00
Clay, ball, dom., airfloated, bgs., c.l., Tenn. ton.19.50 - —
crushed, bulk, Tenn ton.10.00 - —
purified, bgs., c.l., Tenn. ton.20.50 - —
ton.20.50 - —

Clay, ball, imported, airfloated, bgs., c.l., Atlantic port long ton.43.00 -45.00
lump, bulk, Atlantic port ton.27.00 -30.00
China, dom. dry-grd., air-float, 99%, 325 mesh, bgs., c.l., Georgia, works ton.10.50 - —
l.c.l., Georgia, works ton.15.50 - —
300 mesh, bgs., c.l., N. Y. area, works ton.13.50 -14.50
l.c.l. ton.35.00 -36.00
imported, white, lump, bulk, c.l., ex dock, Phila., Portland, Me., gross ton.20.00 -40.00
powd., bgs., c.l., ex dock net ton.30.00 —
l.c.l., ex whse net ton.40.00 -45.00
Clove, Ceylon, bls lb. No prices.
Zanzibar, bls lb. 1.05 - 1.08
CMC, purified, high vis. (see Gum cellulose), standard low vis. bgs. 23,000 lbs. or over, works, frt alld lb. .60 - —
smaller lots, same basis lb. .62 - —
medium vis. bgs., 23,000 lbs or over, works, frt. alld lb. .57 - —
smaller lots, same basis lb. .59 - —
technical high vis. 58% purity, bgs., 20,000 lbs. or more, dlvd. E., 100% basis lb. .56 - —
2,000 to 20,000 lbs., dlvd. E. lb. .58 - —
less than 2,000 lbs., dlvd E. lb. .62 - —
low vis., 80% purity, bgs., or fib. dms., 23,000 lbs. dlvd. E., basis 100% lb. .41 - —
less than 23,000 lbs., dlvd. E., basis 100% lb. .43 - —
62% purity, bgs., or fib. dms., c.l., dlvd. E., basis 100%, lb. .41 - —
l.c.l., dlvd. E., basis 100% lb. 43 - —
58% purity, bgs., c.l., dlvd. E basic, net weight lb. .34 - —
l.c.l., dlvd. E lb. .36 - —
47½% purity, c.l., dlvd., E., basis 100% lb. .41 - —
l.c.l., dlvd. E lb. .43 - —
36½% purity, bgs., c.l., dlvd. E., basis net weight lb. .13½- —
l.c.l. dlvd E lb .20 —

CMC prices W. of the Rockies are 1c. per lb. less than dlvd. E. prices.

Coaltar, crude, resale dms., c.l., ex-whse gal. .275 - .3023
l.c.l., ex-whse. gal. .285 - .3135
tanks, ex works gal. .154 - .165
refined, resale, dms., c.l., ex-whse. gal. .2850- .3135
l.c.l., ex-whse gal. .2950- .3245
tanks, ex-whse gal. .1650- .1760
Cobalt acetate, 23.7% bbls., dlvd lb. 1.30 - —
Carbonate, 46%, powd., bgs., dlvd lb. 2.15 - —
Chloride, 24.2% Co. kgs., dlvd., lb. 1.20 - —
Hydrate, 60-61% Co., bbls., dlvd. lb. 2.72 - —
Linoleate fused, 8½% Co., dms. lb. .72 - —
liquid, 6% Co., dms lb. .53¾- —
Metal, 97-99% kgs., ex whse lb. 2.60 - —
Naphthenate, liquid, 6% Co., dms., dlvd. lb. .45¾- —
Nitrate, 20.1% Co., bbls., dlvd. lb. 1.06 - —
Phosphate, powdered, 32.1% Co., kgs., dlvd lb. 1.69 - —
Oxide, black, 70-71% Co., kgs. lb. 1.96 - —
Resinate, fused, 8% Co., dms lb. .27 - —
Sulphate, cryst., 21% Co., dms., dlvd lb. .89 - —
monohydrated, 33% Co., dms. dlvd lb. 1.40 - —
Tallate, 6% Co., dms., dlvd. lb. .42½- —
Cocaine, USP, cns., 100-oz. lots oz.15.00 - —
Hydrochloride, cns., 100-oz. lots oz.11.75 - —
Cochineal, USP, gray, bgs lb .68 .90
Cocillana bark, bgs lb. .45 Nom.
Cocoa butter, bgs. lb. .73 - —
Codeine, NF, cns. 100-oz. lots oz.13.25 - —
Hydrochloride, cns., 100-oz. lots oz.11.75 - —
Phosphate, USP, cns., 100-oz. lots oz.10.25 - —
Sulphate, USP, cns., 100-oz. lots oz.10.75 - —
Codliver oil (see Oil, codliver).
Cohosh root, black, bls lb. .22 - .25
blue, bls. lb. .22 - .26
Colchicine, USP, bots., cns oz.35.00 - —
Colchicum root, bls lb. .45 - .55
seed, bgs lb. .80 - 1.10
Collodion, USP, dms lb. .32½- —
flexible, USP, dms lb. .34 - —
Colocynth, pulp, bls lb. .25 - .30
Colombo root, bls. lb. .18 - .20
Copaiba balsam, cns., dms lb. .85 - .90
Copper acetate, bbls., c.l. works lb. .34¾- —
l.c.l., works lb. .35¾- —
Carbonate, 55%, bgs., works lb. .263 - .278
Chloride, anhyd., bbls., works lb. .39 - —
crystals, bbls., works lb. .26½- —
Cyanide tech., bbls., 1,000-lb. lots or more lb. .619 - —
smaller lots lb. .639 - —
Gluconate cns. dms lb. 3.00 - 3.24
Hydrate dms. frt. alld. E. Miss. lb. .40¼- .40¾
Metal, electrolytic, dlvd., Valley basis lb. .29½- .30
Naphthenate, liquid, 8% Cu., dms., frt. alld lb. .22¾- —
Nitrate, tech., cryst., bbls., works. lb. .30½- —
Oleate, solid, 9% Cu, dms., works lb. .45 - —
Oxide, black, bbls., works lb. .39 - .47½
red, com'l, bbls., works lb. .42½- .49½
Oxychloride, bls., frt. alld lb. .40 - .50½
Quinolinolate, fib, dms lb. 4.25 - 4.50
Resinate, precip., dms., frt. alld lb. .27¼- —
Stearate, bgs., 5 tons to c.l., dlvd. lb. .37½- —
ton lots, dlvd lb. .38½- —
smaller lots, dlvd lb. .39½- —
Sulphate, cryst., 99%, bgs., c.l., works 100 lbs.10.35 - —
l.c.l. 100 lbs.10.60 -11.35
CP, gran., bbls., works lb. .1715- —
monohydrated, 35% dms., c.l., works 100 lbs.17.10 -17.65
tribasic, dealers, bgs., c.l. works, frt. alld 100 lbs.22.50 - —
l.c.l., works 100 lbs.23.00 -24.50
USP, gran., cryst., dms lb. .1715- —
Undecylenate, dms. lb. 2.90 3.00
Copperas, gran., bgs., c.l., works ton.34.50 - —
l.c.l., dlvd. Metro area 100 lbs. 3.35 - 4.25
bbls., c.l., works ton.40.00 - —
bulk, c.l., works ton 27.00 - —
Copra, Atlantic, Gulf ports, c.i.f. ton.220.00 - —
Pacific ports, c.i.f. ton.215.00 - —
Coriander seed, Argentine, bgs. lb .14 - —
Czech, bgs lb. .07 Nom.
Moroccan, bgs lb. .07 - .07½
Roumanian, bgs. lb. .07¼- .07½
Corn sugar, tanners, chipped, paper bgs. c.l. 60,000 lbs. min. 100 lbs. 7.31 - —
bgs., l.c.l. 100 lbs. 7.46 - —
Syrup, 42°, dms., c.l. 100 lbs. 7.32 - —
l.c.l. 100 lbs. 7.47 - —

A DEPENDABLE SOURCE OF CHLORINE...

when you need it

where you need it

Perchloron®

70% Calcium Hypochlorite Powder

For chlorination during peak periods, for emergency applications, or for treatment of a standby supply—Per*chlor*on is the ideal agent. Because this free-flowing powder is stable under prolonged storage, it is also well suited for use where small or infrequent applications are the rule.

Packed in 100 lb. steel drums

OTHER PENNSALT PRODUCTS FOR WATER PURIFICATION

Ammonia, Anhydrous in cylinders

Liquid Chlorine water works grade in cylinders

For further information, contact the nearest Pennsalt district office. (See list below)

DISTRICT OFFICES AND TELEPHONES

Berkeley 4, Calif. — Ashberry 3-2537
Los Angeles 11, Calif. — Jefferson 6244
Portland, Ore. — Atwater 7655
Tacoma 1, Wash. — Market 9101

PENNSYLVANIA SALT MANUFACTURING COMPANY OF WASHINGTON
2901 Taylor Way, Tacoma 1, Washington

Corrosive, sublimate, NF, cryst., dms., 50-lb. lots or more lb. 3.68 - —
gran. powd., dms., 50-lb. lots or more lb. 3.53 - —
Cortisone acetate, NNR, bulk gm. 4.75 - —
Cottonseed hull ash, 32-36% potash, bgs., dlvd., unit-ton. 1.25 - —
Meal, 41%, sacked, mills ton.56.00 -59.00
36%, same basis ton.53.00 -57.00
Coumarin, cryst., NF, cns lb 2.94 - 3.15
powd., cans lb. 3.20 - 3.25
Cramp bark, NF, bls lb. .85 - —
Cream of tartar, NF, dom., gran. or powd., dms., c.l lb. .32 - —
bbls. 5,000 lbs. one shipment lb. .32½ - —
smaller lots, bbls., kgs. lb. .33 - .36
imported, kgs. lb. .24 - .25
Creosote carbonate, NF, bots. cbys. lb. 2.80 - 2.90
Coaltar, crude, tanks, works, frt. adjusted gal. .22 - —
solution, 80%, tanks, works. gal. .2068- —
refined, dms., c.l., works gal. .3850- —
l.c.l., same basis gal. .4510- —
tanks, same basis gal. .2970- —
Wood, beechwood, cbys., dms. lb. 1.35 - 1.40
hardwood, bots. cbys lb. 1.05 - 1.10
pinewood, dms., works gal. .42½- .50½
Cresol, tech., 50% below 204°C., dry above 207°C., wide distillation range, non-ret. dms. c.l. frt equald lb. .133 - —
l.c.l., same basis lb. .136 - —
ret. dms., c.l., same basis lb. .1325- —
l.c.l., same basis lb. .1375- —
tanks, same basis lb. .120 - .1225
USP, non-ret. dms., c.l., same basis lb. .143 - —
l.c.l., same basis lb. .146 - —
ret. dms., c.l., same basis lb. .140 - —
l.c.l., same basis lb. .145 - —
tanks, same basis lb. .120 - —
Crotonaldehyde, 91-93%, dms., l.c.l., works lb. .24¼- .25
Cryolite, nat., industrial, bgs., c.l., works 100 lbs.10.50 - —
l.c.l., works 100 lbs.11.25 -11.50
Insecticide, dusters, bgs., c.l., dlvd. 100 lbs.14.00 - —
l.c.l., dlvd. 100 lbs.15.00 - —
Cube root, powd., 5% rotenone, bgs., works lb. .23 - —
Cubeb berries, XX, NF, bgs lb. .50 - .51
powd., cs. lb. .58 - .59
Cumene, dms., c.l., works lb. .12 - —
l.c.l., works lb. .14 - —
tanks, works lb. .11 - —
Cumin seed, Iranian, bgs lb. .14 - .14¼
Moroccan, bgs lb. .14 - —
Turkish, bgs. lb. .13½- .14
Cutch extract, 50% tannin, bgs., ex dock, duty extra lb. .08½- —
Cyanamide fertilizer mixing grades, 20.6% N, gran., bgs., Niagara Falls, Ont., contract ton.55.00 - —
pulv., 21% N, bgs., works unit-ton. 2.75 - —
Cyclohexane, tech., dms., c.l., works. gal. .70 - —
l.c.l., works gal. .72 - —
tanks, works gal. .55 - —
Cyclohexanol, tech., dms., c.l., works, frt. alld., E lb. .28½- .37¾
l.c.l., works, same basis lb. .30 - .38¼
tanks, works, same basis lb. .27 - .36¼
Cyclohexanone, tech., dms., c.l., works lb. .33½- —
l.c.l., works lb. .35 - —
tanks, works lb. .32 - —
Cyclohexylamine, dms., c.l., works. lb. .46½- —
l.c.l., works lb. .47½- —
tanks, works lb. .45 - —
Cyclopropane, CP, 2-lb. cyls., works. cyl.48.00 - —
6 oz. cyls., works cyl.12.00 - —
USP, hospitals, cyls., 40-gal. lots gal. .38 - —
100-gal. lots gal. .37 - —
200-gal. lots gal. .36 - —

D

2-4-D, bbls., c.l., works, frt. equald. lb. .51 - —
l.c.l., same basis lb. .56 - .63
Isopropyl ester, dms., c.l., works. lb. .55 - —
l.c.l., works lb. .60 - .67
Dandelion root, bls lb. .35 - .40
DDD, tech., fine grd., fib. dms., c.l., works lb. .50 - —
l.c.l., works lb. .51 - —
DDT powder, fiber dms., c.l., works, frt. equald lb. .28 - —
smaller lots, same basis lb. .30 - —
bags, c.l., same basis lb. .27 - —
smaller lots, same basis lb. .29 - —
Decanol, normal, tech., dms., c.l., dlvd lb. .35 - —
l.c.l., dlvd lb. .37 - —
tanks, dlvd. lb. .32½- —
Deertongue leaves, bls lb. .45 - .48
Defluorinated phosphate, 13% P paper bgs works ton.49.25 - —
17% P, paper bgs., works. ton.58.00 - —
Rock, 14½% P, paper bgs. works ton.50.00 - —
Degras, common, bbls lb. .12 - .13
neutral, less 2% ffa., bbls lb. .27 - .29
over 2% ffa., bbls lb. .26 - .28
Derris root, 5% rotenone powd., bbls lb. .26 Nom.
Desoxyephedrine hydrochloride dextro, bots lb 25.00 - —
dextro-laevo, bots. lb. 6.50 - —
Dextrin, corn, gum, paper bgs., c.l. 100 lbs. 8.95 - —
l.c.l. 100 lbs 9.10 - —
canary paper bgs. c.l. 100 lbs 8.69 - —
l.c.l. 100 lbs 8.84 - —
dark, paper bgs., c.l. 100 lbs 8.79 - —
l.c.l. 100 lbs 8.94 - —
white, paper bgs., c.l. 100 lbs. 8.53 - —
l.c.l. 100 lbs. 8.68 - —
Corn dextrin in cotton bgs. 25c. per 100 lbs. higher.
Potato, bgs. lb. .10½- .11
Dextrose, USP dms lb. .17¾ —
Diacetone (see Alcohol, diacetone)
Diacetyl, flavor grade, bots lb. 4.50 - 5.50
Diamyl ether (see Ether, amyl).
Dianisidin, dms. lb. 2.00 - —
Diatomaceous earth, reg., bgs., c.l., dlvd., California ton.50.00 - —
East coast ton.61.00 - —
l.c.l. ex whse ton.90.00 -100.00
purified, bgs., c.l., dlvd., California ton.65.00 - —
East coast ton.75.00 - —
l.c.l., ex whse ton.100.00 -110.00
Dibenzyl sebacate, CP, dms., c.l., E lb. .89¾- —
l.c.l., same basis lb. .90¼- .90¾
tanks, same basis lb. .88 - —
Dibutyl phthalate, dms., c.l., dlvd., E lb. .35¾- .36
l.c.l., same basis lb. .36¾- .37
tanks, same basis lb. .34 - —
Sebacate, dms., c.l., works lb. .81½- —
l.c.l., works lb. .82 - .82½
tanks, works lb. .80 - —
Tartarate, dms., works, frt. alld lb. .71 - —
Dibutylamine, dms., c.l., dlvd lb. .55 - —
l.c.l., same basis lb. .56 - —
tanks, same basis lb. .53 - —
Dicapryl phthalate, dms., c.l., dlvd. lb. .34½- .34¾
l.c.l., dlvd. lb. .35 - .35¾
tanks, dlvd. lb. .33 - —
Sebacate, dms., c.l., works lb. .66 - —
l.c.l., works lb. .68½- .69
tanks, works lb. .66½- —
Dichloroanilin, dms., works lb. .75 - .83
Dichlorodiphenyltrichloroethane (see DDT).
Dichloroethyl ether (see Ether, dichloroethyl).
Dichloropentanes, dms., c.l., works. lb. .05 - —
l.c.l., works lb. .05¾- —
tanks, works lb. .04½- —
Dicyclohexylamine dms. c.l., works. lb. .51 - —
l.c.l., works lb. .51¾- —
tanks, works lb. .49¾- —
Dicyclohexyl phthalate, fib. dms., c.l., frt. alld lb. .60 - —
l.c.l., same basis lb. .61 - —
Dieldrin, dms. frt. alld lb. 1.80 - —
l.c.l., frt. alld lb. 2.40 - —
Diethanolamine dms. c.l., dlvd E. lb. .29¼- —
l.c.l. same basis lb. .30¼- —
tanks, same basis lb. .27½- —
Diethyl carbonate, dms., c.l., frt. alld lb. .46¾- —
l.c.l. same basis lb. .47¾- —
tanks, same basis lb. .45 - —
Maleate, dms., c.l., dlvd lb. .50 - —
l.c.l. dlvd lb. .48¼- —
tanks, dlvd lb. .43¼- —
Oxalate, dms., c.l., frt. alld lb. .41¾- —
l.c.l. same basis lb. .42¾- —
tanks, same basis lb. .40 - —
Phthalate, dms., c.l., dlvd lb. .27 - —
l.c.l., dlvd. lb. .28 - —
tanks, dlvd. lb. .25 - —
Diethyl sulphate, dms., c.l., works. lb. .18¾- —
l.c.l. works lb. .19¼- —
tanks works lb. .17 - —
Diethylamine, dms., c.l., dlvd. E lb. .50½- —
l.c.l., same basis lb. .51½- —
tanks, same basis lb. .48½- —
Diethylaniline, dms., c.l., frt. alld., lb. .51 - —
l.c.l., same basis lb. .52 - —
tanks, same basis lb. .50 - —
Di-2-ethylhexyl adipate (see Dioctyl adipate).
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).
Diethyleneglycol dms. c.l., dlvd. E. lb. .20¼- —
l.c.l. same basis lb. .21¼- —
tanks, same basis lb. .18½- —
Borborate dms. l.c.l lb. .20½- —
Diethylether, dms., c.l., works lb. .46½- —
l.c.l., works lb. .47 - —
Monobutylether, dms., c.l., works lb. .28¾- —
l.c.l., works lb. .29¼- —
tanks, works lb. .27 - —
Acetate, dms., c.l., works lb. .30 - —
l.c.l. works lb. .30½- —
tanks, dlvd. E lb. .25½- —
Monoethylether dms., c.l., dlvd lb. .20¾- —
l.c.l., dlvd lb. .21½- —
tanks, dlvd. lb. .19½- —
Acetate, dms., c.l., works lb. .26¾- —
l.c.l., works lb. .27¼- —
tanks, dlvd. F. lb. .25¼- —
Monomethylether, dms., c.l., works. lb. .24¾- —
l.c.l. works lb. .25¼- —
tanks, works lb. .23¼- —
Diethylenetriamine dms., c.l., dlvd E. lb. .43 - —
l.c.l. same basis lb. .44 - —
tanks, same basis lb. .41½- —
Diethylethanolamine, dms., c.l., dlvd lb. .67½- —
l.c.l., same basis lb. .68½- —
tanks, same basis lb. .65½- —
Diethylstilbestrol, USP, bots., 10-kilo lots kilo.110.00 - —
1 kilo lot kilo.120.00 - —
Digitalis leaves, USP, dom., dms., lb. .90 - 1.10
Digitoxin, USP, bots. gram. 5.50 - 6.50
Diglycol laurate, dms lb. .35½ .42
Oleate, dms lb. .28½- .29¼
Stearate, dms lb. .25 - .26½
Dihexyl sebacate, dms., c.l., works lb. .73¾- —
l.c.l., works lb. .74¼- .74¾
tanks, works lb. .72 - —
Dihydrazine sulphate, dms, works lb 1.10 - 1.25
Dihydrostreptomycin hydrochloride, bulk gram. .17 - —
Sulphate, bulk gram. .17 - —
Dihydroxydichlorodiphenylmethane, pure dms lb 2.80 - 3.00
tech., dms lb. 1.04 - 1.14
Di-isobutyl ketone, dms., c.l., dlvd lb. .15¼ —
l.c.l. dvid lb. .16¼ —
tanks, dlvd lb. .13½ —
Phthalate, dms., c.l., dlvd. E lb. .35 - —
l.c.l., same basis lb. .33 - —
tanks, same basis lb. .33 - —
Di-isobutylene, dms., c.l., works lb. .10 - —
l.c.l., works lb. .11 - —
tanks, works lb. .08 - —
Di-iso-octyl phthalate, dms. c.l., dlvd. lb. .37 - —
l.c.l., same basis lb. .38 - —
tanks, same basis lb. .35 - —

CHEMICALS OUTLOOK

November 1953

WYANDOTTE CHEMICALS

This news bulletin about Wyandotte Chemicals products and their applications is published to help keep you posted. Perhaps you will want to route these and subsequent facts to other interested members of your organization. Additional product information, through Wyandotte research and technical service facilities, and trial quantities of Wyandotte products are always available upon request. May we serve you?

PLURONICS AS PLASTICIZERS FOR PHENOLIC RESINS

Wyandotte Pluronics*, originally developed as nonionic surface active agents, have shown great promise for use with phenolic resins. They have proved themselves through commercial acceptance as effective plasticizers in proportions as low as 5%.

The Pluronics are suggested wherever increased flexibility or decreased brittleness in a phenolic resin is required. The flexibility of the plasticized resin is directly related to the proportion of the Pluronic incorporated. Almost any degree of plasticization can be achieved as the Pluronics are compatible in excess of 50% with unmodified phenolic resins.

Manufacturers of such products as phenolic laminates that must be cold punched or cut, bottle closures, roller coatings and molded plastic parts may select any of the four Pluronics for their use: flake or powdered solid (F68), or liquids of different viscosities (L62, L64 and L44). All of the Pluronics are of approximately equal effectiveness for this application. Data, samples and technical assistance are readily available.

NEW LABORATORIES ADVANCE RESEARCH IN RUBBER AND PLASTICS

Wyandotte's new research center has made possible further development of non-black reinforcing and pigment-extending agents for the rubber industry. The new laboratories are well equipped for the preparation and testing of rubber and plastic compounds. Among the facilities are mills, mixers, presses, extruders, tensile testers, flexometers and a wide variety of other instruments for testing the physical properties of compounds using ASTM standard procedures.

One of Wyandotte's recent developments has been Purecal* SC, a new, coated, ultrafine, precipitated calcium carbonate. Extensive testing in the labs and in the field has indicated possible money- and time-saving characteristics.

WE INVITE YOUR REQUESTS FOR ASSISTANCE

If you have a chemical or processing problem and are stymied, give us the particulars. We may be able to help you arrive at a satisfactory solution.

*REG. U.S. PAT. OFF.

Wyandotte CHEMICALS

WYANDOTTE CHEMICALS CORPORATION
WYANDOTTE, MICHIGAN • OFFICES IN PRINCIPAL CITIES

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA • CALCIUM CARBONATE • CALCIUM CHLORIDE • CHLORINE • HYDROGEN • DRY ICE • GLYCOLS • DDT
BHC • SYNTHETIC DETERGENTS • CARBOSE* (Sodium CMC) • ETHYLENE DICHLORIDE • PROPYLENE DICHLORIDE • AROMATIC SULFONIC ACID DERIVATIVES
SOIL CONDITIONERS AND AGRICULTURAL CHEMICALS • *OTHER ORGANIC AND INORGANIC CHEMICALS*

Di-isopropylamine—Dyes, Coaltar, for Stains, Spirit-Soluble

Di-isopropylamine dms. c.l., dlvd. E. of Rockies	lb.	.50	—
l.c.l., same basis	lb.	.51	—
tanks, same basis	lb.	.48	—
Dillseed, dewhiskered, bgs	lb.	.15¾-.16	
natural, bgs	lb.	.14 - .14½	
Dimethyl anthranilate, cns	lb.	5.25 - 5.75	
Chloroacetal dms., c.l. works	lb.	.53	—
l.c.l. works	lb.	.55	—
tanks works	lb.	.51	—
Hydroquinone, dms	lb.	1.70 - 2.75	
Phthalate, dms., c.l., dlvd	lb.	.29½-	—
l.c.l., dlvd.	lb.	.30½-	—
tanks, dlvd.	lb.	.27½-	—
Sebacate, dms., c.l., works	lb.	1.26¾-	1.27¾
l.c.l., works	lb.	1.26 -	—
tanks, works	lb.		
Sulphate, 55 gal., ret., dms., c.l., works	lb.	.15 -	—
l.c.l. works	lb.	.16 -	—
10 gal. ret dms., l.c.l., works	lb.	.16½-	—
Dimethylamine, 25-40%, dms., c.l., frt. equald	lb.	.37 -	.38
l.c.l., frt. equald	lb.	.37½-	.38½
tanks, frt. equald	lb.	.33 -	—
Dimethylaniline, dms., c.l., frt. alld.	lb.	.29½-	—
l.c.l., frt. alld.	lb	.30½-	—
tanks, frt. alld.	lb	.28¼-	—
Dimethylethanolamine, anhydrous, dms., c.l., dlvd	lb	1.43 -	—
l.c.l. dlvd	lb	1.45 -	—
tanks, dlvd.	lb.	1.40 -	—
Dimethylethanolamine, 70% dms., c.l., dlvd., basis 100%	lb.	.54 -	—
l.c.l. dlvd.	lb.	.55 -	—
tanks, dlvd.	lb.	.52¼-	—
Dimethylformamide dms., works	lb.	.34 -	—
tanks, works	lb.	.33 -	—
Dinitroaniline, dms., frt. equald	lb.	.57 -	—
Dinitrobenzene, crude, dms	lb.	.30 -	—
purified, dms.	lb.	.32 -	—
Dinitrochlorobenzene, dms., c.l., frt. alld. E	lb.	.15¼-	—
l.c.l., frt. alld. E	lb.	.15¾-	—
tanks, frt. alld. E	lb.	.15 -	—
Dinitrophenol, obls.	lb.	.37 -	—
Dinitrotoluene, oily, dms.	lb.	.10 -	—
refined, dms.	lb.	.21 -	—
Dioctyl adipate, dms., c.l., works	lb.	.46¾-	.47
l.c.l., works	lb.	.47¾-	.48
tanks, works	lb.	.45 -	—
Phthalate, dms., c.l., frt. alld.	lb.	.37 -	—
l.c.l., frt. alld.	lb.	.38 -	—
tanks, frt. alld.	lb.	.35 -	—
Diorthotolyguanidin, dms., ton lots, dlvd.	lb.	.57 -	—
smaller lots, dlvd	lb.	.58 -	—
Dioxane, dms., c.l., works	lb.	.28¾-	—
l.c.l., same basis	lb.	.29¼-	—
tanks, same basis	lb.	.27 -	—
Dip oil (see Tar acid oil).			
Dipentaerythritol, bgs., c.l., works	lb.	.34 -	—
l.c.l., works	lb.	.37 -	—
Dipentene, dest.-dist., dms., extra, c.l., works	gal.	.49 -	—
l.c.l., works	gal.	.50 -	—
ex-whse.	gal.	.68 -	—
steam-dist., dms., c.l., works, South	gal.	.63 -	.72
dlvd., N. Y.	gal.	.82 -	.86
tanks, works, South	gal.	.50 -	.60
Diphenyl, bbls. c.l. works	cp.	.15 -	—
l.c.l., works	lb.	.16 -	—
Diphenyl in bags ¼c. lower.			
Oxide, perfume grade, cns	lb.	.54 -	.61
Phthalate, dms., c.l. works	lb	.51¾-	—
l.c.l., same basis	lb	.53¾-	—
Diphenylamine, refined, gran., bbls., c.l., works	lb.	.28 -	—
l.c.l., works	lb.	.30 -	—
tanks, works	lb.	.25 -	—
tech. tanks, works	lb.	.24 -	—
Diphenylguanidin, dm.., ton lots	lb.	.48 -	—
smaller lots	lb.	.49 -	.50
Diphenylhydantoin-sodium, USP, dms.	lb.	5.30 -	5.60
Dipropyleneglycol, dms., c.l., frt. alld	lb.	.16¾-	.17
l.c.l. same basis	lb.	.17¾-	.18
tanks same basis	lb.	.15 -	—
Methylether, dms., c.l., dlvd. E	lb.	.20¾-	—
l.c.l. same basis	lb.	.21¾-	—
tanks, same basis	lb.	.19¼-	—
Di-secondary-amylphenol, dms., c.l., works	lb.	.30¼-	—
l.c.l. works	lb.	.33¼-	—
tanks, works	lb.	.28¼-	—
Di-tertiary-amylphenol, dms., c.l., works	lb.	.30¼-	—
l.c.l., works	lb.	.33¼-	—
tanks, works	lb.	.28¼-	—
Di-tertiary butylmetacresol, dms., c.l., works	lb.	.31 -	—
l.c.l. works	lb.	.32 -	—
tanks works	lb.	.30 -	—
Di-tertiary butylparacresol, dms., c.l., works	lb.	.91 -	—
l.c.l., works	lb.	.95 -	—
Divi-divi, 45% tannin bgs., bls., c.l., U.S ports, exdock	ton	70.00	-72.00
Divinylbenzene 20-25%, dms., c.l., works	lb.	.20 -	—
l.c.l., works	lb.	.21 -	—
tanks, works	lb.	.19 -	—
40-50%, dms., c.l., works, basis 100%	lb.	1.00 -	—
l.c.l., works, basis 100%	lb.	1.15 -	—
Dodecylbenzene, dms., c.l., frt. equald	lb.	.14½-	—
l.c.l., same basis	lb.	.15½-	—
tanks, same basis	lb.	.12½-	—

Conqueror of the Cations... the Versenes*

THE VERSENES*
"Versene" is the registered trade mark of certain synthetically prepared polyamino acids and their salts. The Versenes form soluble non-ionic chelates with polyvalent metallic ions and completely change their properties so that they can no longer react with other materials and be precipitated from solution by common precipitating agents.

THERE ARE NINE

VERSENE REGULAR (the original Versene) inactivates all metallic ions but is not particularly effective for complexing iron in alkaline solutions (liquid or powder).

VERSENE Fe_3 SPECIFIC is the most powerful complexing agent known for *iron* in the normal pH range. It also chelates copper, nickel, cobalt and zinc (47% solution).

VERSENE Fe_3 is a combination of VERSENE and VERSENE Fe_3 SPECIFIC. It complexes both iron and other metallic ions. (Powder or liquid)

VERSENE-T complexes ferric and divalent metal ions including hard water salts in *any* caustic solution. (55.5% solution)

VERSENE-9. This is the tri-sodium salt of EDTA. It has a pH of 9.3 in solution at 1% concentration. 1 gram complexes a minimum of 242 mgms. of $CaCO_3$. Its general chemical reaction is identical to Versene Regular.

VERSENE IRON CHELATE is the di-sodium ferrous complex of EDTA absorbed into inert vermiculite. Used in Agriculture for citrus and other green growth to cure iron deficiency in acid soils.

DI-SODIUM VERSENATE DI-HYDRATE (dry powder) an Analytical Reagent grade of Versene Regular for research and analytical purposes.

(A) VERSENATE INDICATOR (alcohol solution). Color indicator for Versenate method of water analysis.

CALCIUM DI-SODIUM VERSENATE (25% solution). Chemically Pure grade material for use as stabilizers in drugs, vitamins, pharmaceuticals.

LEAD DI-SODIUM VERSENATE (34% solution). Preformed complex for use in vinyl plastics.

The Versenes give you mole-for-mole control over cations in solution. They are made only by the Bersworth Chemical Company under processes originated, developed and patented by F. C. Bersworth. Quality-control over manufacture is so high that uniform complexing power is guaranteed.

VERSENES* — MADE FOR YOU
Gladly will we share with you our quarter-century of experience in pioneering the polyamines. Samples for experiment will be provided on request and without obligation. Ask for Technical Bulletin #2. Chemical Counsel available. Write Dept. F. Send for prices.

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Siegel Chemical Co., Inc., One Hanson Place, Brooklyn 1, New York
George Mann & Co., Inc., 251 Fox Point Boulevard, Providence, R. I.
Wasatch Chemical Co., 2225 So. Fifth East, Salt Lake City, Utah
Barada & Page, Inc., Houston, Dallas, Corpus Christi, New Orleans, St. Louis, Wichita, Oklahoma City, Tulsa, Kansas City, Mo.
Braun-Knecht-Heimann Co., San Francisco, Calif.
Van Waters & Rogers, Inc., Seattle, Wash., & Portland, Ore.
Braun Corporation, Los Angeles, Calif.

Dyes, coaltar, certified colors for food, drugs and cosmetics, 5-lb. and 1-lb. lots dlvd.:—

Blue, FD&C, No. 1, cns	lb.	17.00	-17.60
No. 2, cns	lb.	17.00	-17.60
Green FD&C, No. 1, cns	lb.	17.00	-17.60
No. 2, cns	lb.	22.20	-22.95
No. 3, cns	lb.	35.25	-35.90
Orange, FD&C, No. 1, cns	lb.	3.65	- 3.75
No. 2, cns	lb.	4.65	- 4.75
Red, FD&C, No. 1, cns	lb.	7.55	- 7.85
No. 2, cns	lb.	4.00	- 4.10
No. 3, cns	lb.	22.20	-22.85
No. 4, cns	lb.	7.20	- 7.50
No. 32, cns	lb.	5.30	- 5.40
Violet, FD&C, No. 1, cns	lb.	17.00	-17.60
Yellow FD&C, No. 1, cns	lb.	10.50	-11.05
No. 3, cns	lb.	3.30	- 3.40
No. 4, cns	lb.	3.30	- 3.40
No. 5 cns	lb.	4.00	- 4.10
No. 6, cns	lb	4.00	- 4.10

Dyes, coaltar, certified colors for drugs and cosmetics, 1-lb. lots, works, 25-50 lb. lots, dlvd.:—

Black, D&C, No. 1, cns	lb.	10.95	- —
Brown, D&C, No. 1, cns	lb.	16.10	- —
Green, D&C, No. 5, cns	lb.	16.10	- —
No. 6, cns	lb.	16.10	- —
No. 7 cns	lb.	14.80	- —
Orange, D&C, No. 3, cns	lb.	10.95	- —
No. 4, cns	lb.	20.05	- —
No. 5, cns	lb.	5.70	- —
No. 10, cns	lb.	20.70	- —
Red, D&C, No. 8, cns	lb.	2.85	- —
No. 9, cns.	lb.	2.85	- —
No. 10, cns.	lb.	2.30	- —
No. 11, cns.	lb.	1.85	- —
No. 12, cns.	lb.	2.65	- —
No. 17 cns.	lb.	10.95	- —
No. 18 cns.	lb.	24.60	- —
No. 19 cns.	lb.	15.45	- —
No. 21, cns.	lb.	3.60	- —
No 22, cns.	lb.	10.95	- —
No 28, cns.	lb.	24.65	- —
No. 33 cns.	lb.	17.45	- —
Violet, D&C, No. 2, cns	lb.	16.10	- —
Yellow D&C, No. 7, cns	lb.	10.95	- —
No. 10, cns	lb	13.50	- —
No. 11, cns	lb.	13.50	- —

Dyes, coaltar, certified colors for drugs and cosmetics, external use, 1-lb lots, works, 25-50 lb. lots, dlvd:—

Blue, Ext., D&C, No. 1, cns	lb.	16.10	- —
Green Ext., D&C, No. 1, cns	lb	16.10	- —
Red Ext., D&C, No. 1, cns	lb.	13.50	- —
Yellow Ext., D&C No. 1, cns	lb.	10.95	- —

Dyes, coaltar, for general use in cloth dyeing (numbers are those of the Colour Index scale or prototype), contract, dlvd., No.

20	Chrysoidine Y	lb.	.74	- —
27	Fast light orange 2G	lb.	.90	- —
31	Phloxine 2G	lb.	.74	- —
36	Yellow 2G	lb.	.83	- —
40	Orange R extra, conc	lb.	1.06	- —
57	Fuchsine 6B	lb.	1.08	- —
79	Scarlet 2R	lb.	.81	- —
151	Orange AD	lb.	.55	- —
161	Orange RR	lb.	.66	- —
176	Fast red A	lb.	.99	- —
179	Rubine XX, conc	lb.	1.14	- —
180	Blue F4B	lb.	.92	- —
185	Brilliant scarlet 3RN, conc	lb.	.93	- —
202	Chrome blue black, conc	lb.	.75	- —
203	Chrome black T	lb.	.78	- —
208	Fast blue SR	lb.	.91	- —
216	Chrome red B	lb.	.84	- —
234	Brown Y	lb.	.98	- —
246	Blue black, extra, conc	lb.	.95	- —
275	Milling red 3R, conc	lb.	2.03	- —
289	Navy blue 3R, conc	lb.	1.19	- —
299	Black F, conc	lb.	1.54	- —
304	Neutral black 2B, conc., 200%	lb.	2.01	- —
326	Fast scarlet 4BNC	lb.	1.64	- —
332	Bismarck, brown, RX, conc.	lb.	.93	- —
365	Brilliant yellow, conc	lb.	2.57	- —
382	Scarlet B	lb.	1.82	- —
401	Diazo black, BHD	lb.	.69	- —
406	Blue 2B, extra conc	lb.	1.07	- —
419	Red FC conc	lb.	1.12	- —
420	Brown M	lb.	.98	- —
448	Red 4BX, conc	lb.	1.30	- —
518	Diamine sky blue FF, extra, conc	lb.	1.50	- —
561	Brown B	lb.	2.03	- —
581	Direct black EB	lb.	.94	- —
593	Green BY, conc	lb.	.72	- —
596	Yellow Brown K extra	lb.	.91	- —
620	Yellow 2G	lb.	1.01	- —
639	Fast yellow 2G	lb.	1.79	- —
640	Yellow XX	lb.	1.61	- —
655	Yellow OX	lb.	2.04	- —
657	Green V	lb.	2.10	- —
662	Brilliant green G	lb.	2.79	- —
667	Brilliant milling green 6B, conc	lb.	3.68	- —
671	Blue, EG	lb.	1.70	- —
681	Crystal violet powder	lb.	2.15	- —
698	Violet 4BXN	lb.	1.74	- —
720	Brilliant blue, BBG	lb.	1.88	- —
729	Blue, B, conc	lb.	2.79	- —
749	Red BX	lb.	4.33	- —
814	Yellow, NN, Conc	lb.	3.11	- —
841	Safranine GF, extra, conc.,	lb.	3.17	- —
865	Nigrosine, WSJ	lb.	.75	- —
922	Blue GXX	lb.	1.71	- —
978	Black GXCF conc	lb.	.32	- —
1034	Alizarine red SC	lb.	2.59	- —
1054	Alizarine blue SAPX	lb.	2.91	- —
1078	Alizarine green CG, extra,	lb.	2.72	- —
1085	Alizarine blue, black, B	lb.	2.33	- —
1096	Golden orange, GFD, single paste	lb.	1.99	- —
1099	Dark blue BO, single paste,	lb.	1.75	- —
1101	Jade green N, double paste,	lb.	1.98	- —
1106	Blue RS, double paste	lb.	2.96	- —
1113	Blue BLFD double paste	lb.	2.25	- —
1150	Olive R, single paste	lb.	1.10	- —
1151	Brown R, single paste	lb.	1.76	- —
1171	Indigo, synthetic, 20% paste	lb.	.31	- —
1217	Orange RD single paste	lb.	1.65	- —
p-4	Brown, PG	lb.	2.30	- —
p-24	Gray L	lb.	1.60	- —
p-14	Brown, EB	lb.	1.51	- —
p-80	Diazo brilliant scarlet ROAD	lb.	2.79	- —
p-202	Diazo black VJ, conc	lb.	1.74	- —
p-244	Brilliant scarlet BN	lb.	1.31	- —
p-313	Naphthol SWF	lb.	2.42	- —

Dyes, coaltar, for stains, oil-soluble, 100-lb. dms., sellers' works.

Black blue No. 550	lb.	.81	- —
Jet, No. 551	lb.	.89	- —
Brown R, conc.	lb.	1.72	- —
Orange R, brilliant	lb.	.90	- —
Red 4 B, conc.	lb.	1.37	- —
Yellow C	lb.	1.18	- —
FN, conc.	lb.	1.22	- —

Dyes, coaltar, for stains, spirit-soluble, 100-lb. dms., sellers' works:—

Auramine, O	lb.	1.85	- —
Black, basic, blue	lb.	1.21	- —
Jet	lb.	1.21	- —
Blue, methylene, 2 B, conc	lb.	1.71	- —
Brown, Bismarck, R, conc	lb.	.86	- —
Chrysodine, R, extra	lb.	.60	- —
Y extra	lb.	.64	- —
Fuchsine, conc	lb.	3.08	- —
Green, malachite, conc	lb.	2.10	- —
Rhodamine, B	lb.	4.33	- —
Safranine, Y, conc	lb.	2.90	- —
Violet, methyl, B	lb.	1.10	- —

Dyes, coaltar, for stains, water-soluble, 100-lb. dms., sellers' works:

Azo rubine R, extra, conc	lb.	1.04	- —
Black, acid blue B, extra	lb.	.86	- —
Fast light, 3 G, extra	lb.	2.04	- —
Methanil, conc	lb.	.91	- —
Orange Acid, Y, conc	lb.	.47	- —
Scarlet, croceine, MOO	lb.	1.45	- —
Yellow azo, conc	lb.	.90	- —

Oil-soluble, spirit-soluble, water-soluble dyes in kegs, 3c. higher; tins, 10c. higher.

E

Echinacea root, bls	lb.	1.25	- —
Egg albumen (see Albumen).			
Yolk, dried, dom., bbls	lb.	1.35	- 1.38
tanners, bbls	lb.	.06	- .06½
Elder flowers, bright, bls	lb.	.30	.40
Elm bark, grinding, bls	lb.	No prices.	
powd., bbls., bxs	lb.	.60	- —
select, bundles	lb.	.65	- —
Emetine hydrochloride, USP, bots	oz.	32.95	-35.00
Ephedrine, synthetic, USP, anhydrous bots., 100-oz. lots	oz.	.98	- 1.00
hydrous, bots., 100-oz. lots	oz.	.93	- —
Hydrochloride, tin 100-oz. lots	oz.	.75	- —
Sulphate, cryst., tins, 100-oz. lots	oz.	.72	- —
powd., tins, 100-oz. lots	oz.	.73	- —
Epichlorohydrin, dms., c.l., works	lb.	.39	- —
l.c.l., works	lb.	.40	- —
tanks, works	lb.	.37	- —
Epinephrine, synth, USP, bots., 100 gram lots	gram.	.45	- .55
Epsom salt, tech, ogs., c.l., works, 100 lbs.	100 lbs.	2.15	- —
l.c.l., works	100 lbs.	2.90	- 3.15
USP, cryst., bgs., c.l., works, 100 lbs.	100 lbs.	2.35	- —
l.c.l., 5,000 lbs., 1 withdrawal	100 lbs.	3.10	- —
smaller lots	100 lbs.	3.35	- —
Ergosterol, unirradiated, cryst	kilo	150.00	- —
Ergot, NF, dms., tin-lined	lb.	3.50	- 4.00
Eserine, bots	oz.	45.00	-50.00
Salicyl, USP, bots	lb.	29.75	-32.50
Sulphate, bots	oz.	34.50	-35.61
Ether acetate (see Ethyl acetate).			
Butyl, dms., c.l., works	lb.	.31½	- —
l.c.l., works	lb.	.32	- —
tanks, works	lb.	.30	- —
Butyric (see Ethyl butyrate).			
Dichloroethyl, refd., dms., c.l., dlvd. E	lb.	.14	- .14½
l.c.l., same basis	lb.	.15	- .16
tanks, same basis	lb.	.13	- —
technical, dms., c.l., works	lb.	.13	- —
l.c.l., works	lb.	.13½	- —
tanks works	lb.	.12	- —
Ethyl, absolute, ACS, dms	lb.	.37	- —
anesthesia USP, hospitals, 1-lb. cns	lb.	.89	- —
½-lb. cns	lb.	.97	- —
¼-lb. cns	lb.	1.05	- —
solvent, USP, dms., c.l., dlvd	lb.	.15¾	- —
c.l., same basis	lb.	.16¾	- —
tanks, same basis	lb.	.13¾	- —
synthetic, dms., c.l., dlvd. E	lb.	.12	- —
l.c.l., same basis	lb.	.13	- —
tanks, same basis	lb.	.10	- —
Isopropyl, dms., c.l., dlvd	lb.	.07	- —
l.c.l., dlvd.	lb.	.08	- —
tanks, dlvd	lb.	.05	- —
Nitrous, conc., bots., 100-lb. lots	lb.	1.28	- 1.35
Vinyl, USP, anesthesia, bots., 50 cc. hospitals	bot.	1.12	- —
75 cc. hospitals	bot.	1.56	- —
Ethyl acetate, natural, fermentation 85-88%, dms., c.l., frt. alld.	lb.	.13	- —
l.c.l., frt. alld	lb.	.14	- —
tanks, frt. alld	lb.	.11	- —
95-96%, dms., c.l., frt. alld.	lb.	.13¼	- —
l.c.l., frt. alld.	lb.	.14¼	- —
tanks frt alld	lb.	.11¼	- —
99%, dms., c.l., frt. alld.	lb.	.13½	- —
l.c.l., frt. alld.	lb.	.14½	- —
tanks frt alld	lb.	.11½	- —
synthetic, 85-98%, dms., c.l., dlvd.	lb.	.13	- —
l.c.l., dlvd.	lb.	.14	- —
tanks, dlvd	lb.	.11	- —
95-98%, dms., c.l., dlvd	lb.	.13¼	- —
l.c.l., dlvd.	lb.	.14¼	- —
tanks, dlvd	lb.	.11¼	- —
99%, dms., c.l., dlvd	lb.	.13½	- —
l.c.l., dlvd.	lb.	.14½	- —
tanks dlvd	lb.	.11½	- —
Acetoacetate, dms., c.l., dlvd	lb.	.55	- —
l.c.l., dlvd	lb.	.56½	- —
Acrylate, dms., c.l., and truck load, works	lb.	.45½	- —
less than truckload, works	lb.	.46	- —
tanks, works	lb.	.42¾	- —
Aminobenzoate, USP, (see Benzocaine).			
Benzoate, cns., dms	lb.	.74	- .90
Bromide, tech., 98%, dms., c.l.	lb.	.41	- —
l.c.l.	lb.	.43	- —
Butyrate, works	lb.	.80	- 1.03
Carbamate (see Urethane).			
Chloride, tech, dms., c.l., works	lb.	.18	- .20
cyls., c.l., same basis	lb.	.20	- .22
tanks, same basis	lb.	.10	- —
USP, bbls, cyls	lb.	.22	- .24
Cinnamate, cns	lb.	2.71	- 3.45
Formate, dms	lb.	.60	- —
Gallate, dms., 100 to 2,000-lb. lots	lb.	3.90	- 4.40
Iodide, cbys., works	lb.	3.30	- —
Methacrylate, dms., c.l., and solid, No. 1, bxs., l.c.l.	lb.	.45	- —
less than truckload, works	lb.	.50½	- —
Nitrite (see Ether nitrous).			
Oenanthate, dms	lb.	1.00	- 1.50
Oleate, dms., l.c.l., works	lb.	No prices.	
Oxalate (see Diethyl oxalate).			
Silicate, dist. (see Tetraethyl-orthosilicate)			
40% available SiO, dms., works,	lb.	.60½	- —
Ethylalphanaphthylamine (see Monoethylalphanaphthylamine)			
Ethylamine (see Mono, Di- or Tri-)			
Ethylanilin (see Monoethylanilin)			
Ethylbenzene, 99%, dms., c.l.	lb.	.14	- .20¼
l.c.l.	lb.	.14	- .20¼
tanks	lb.	.13	- .18½
Ethylbutylketone, dms., c.l., works,	lb.	.35½	- —
l.c.l., works	lb.	.36	- —
tanks	lb.	.34	- —
Ethylcellulose, vis. 7 cps., bgs., 5,000 lb. lots or more, works	lb.	.72	- —
smaller lots, works	lb.	.72	- .80
vis. 10, 20, 50, 100, 150 cps., bgs., 5,000-lb. lots or more, works	lb.	.63	- —
smaller lots	lb.	.67	- .75
Ethylene dichloride, dms., c.l., dlvd.	lb.	.10¼	- —
l.c.l., same basis	lb.	.12¼	- —
tanks, same basis	lb.	.09	- —
Ethylene dichloride prices W. of Rockies 1c per lb higher.			
Oxide, cyls., c.l., works	lb.	.26	- —
l.c.l. works	lb.	.27	- —
tanks, dlvd	lb.	.19	- —
Trichloride (see Trichloroethane).			
Ethylenediamine, 85-88%, dms., c.l., dlvd. E., basis 100%	lb.	.46	- —
l.c.l., dlvd. E., basis 100%	lb.	.47	- —
tanks, dlvd. E., basis 100%	lb.	.44	- —
Ethyleneglycol, dms., c.l., dlvd. E.	lb.	.18¾	- —
l.c.l., same basis	lb.	.19¾	- —
tanks, same basis	lb.	.17	- —
Monobutylether, dms., c.l., dlvd. E.	lb.	.20	- —
l.c.l., dlvd. E	lb.	.21	- —
tanks, dlvd. E	lb.	.18½	- —
Monoethylether, dms., c.l., dlvd. E.	lb.	.20	- —
l.c.l., dlvd. E	lb.	.21	- —
tanks, dlvd. E	lb.	.18½	- —
Acetate, dms., c.l., dlvd. E.	lb.	.18¼	- —
l.c.l., dlvd. E.	lb.	.19¼	- —
tanks, dlvd. E.	lb.	.16½	- —
Monomethylether, dms., c.l., dlvd. c.l., dlvd. E	lb.	.18¼	- —
l.c.l., dlvd. E	lb.	.21	- —
tanks, dlvd. E	lb.	.18½	- —
Acetate, dms., c.l., dlvd. E.	lb.	.28¾	- —
l.c.l., dlvd. E	lb.	.29¼	- —
tanks, dlvd. E	lb.	.27	- —
Monostearate, dms	lb.	.30	- .31
Ethylethanolamines, mixed, dms., c.l., frt alld., E. Miss	lb.	.42	- —
l.c.l., same basis	lb.	.43	- —
tanks, same basis	lb.	.40	- —
Ethylmorphine hydrochloride, USP, bots	oz.	13.85	- —
Ethylorthotoluidin (see Monoethyl-orthotoluidin).			
Ethylvanillin, cns., 25-lb. lots	lb.	6.75	- 7.50
smaller lots	lb.	7.35	7.40
Eucalyptol, USP, cns., dms	lb.	1.40	- 1.50
Eugenol, pure, USP, bots	lb.	2.55	- 3.15
Euphorbia herb, bls	lb.	.12	- .14

F

Feldspar, enamel, 100 mesh, bgs., works	ton.	20.00	-22.00
Glass, 20 mesh, bulk, tons, works	ton.	11.75	-12.50
Pottery, bgs., ton lots, works	ton.	20.00	-22.00
bulk, c.l. works	ton.	18.00	-20.00
Fennel, Argentine, bgs	lb.	.13	- .14
Czech, medium, bgs	lb.	.14	- .14½
light, bgs	lb.	.23	- .23½
French, bgs	lb.	.34	Nom.
Indian, bgs.	lb.	.16	- .16½
Fenugreek seed, Moroccan, bgs.	lb.	.07¼	- —
Ferric-ammonium citrate (see Iron ammonium citrate)			
Ferric cacodylate (see Iron cacodylate)			
Glycerophosphate (see Iron glycerophosphate)			
Hypophosphite (see Iron hypophosphite)			
Sulphate (see Iron sulphate ferric)			
Ferrous gluconate NF, dms	lb.	.83	.87
Fir, balsam, Canada, cns	gal.	34.00	-35.00
Oregon, bbls	gal.	No prices.	
Fishliver oil (see Oil, fishliver)			
Fishmeal, menhaden, ground, domestic, 60% protein, bags, Balto area	ton.	134.00	-135.00
Fishscrap, menhaden, dried, 60% protein, bags, Balto area	ton.	129.00	-130.00
Fluorspar, dom., acid grade, bulk, c.l., mine	ton.	60.00	- —
ceramic grade, 93-96% CaF_2, grd., bulk, c.l., mine	ton.	57.50	- —
85-92% CaF_2, grad., bulk, c.l., mine	ton.	47.00	- —
Fluorspar, d o m., metallurgical grade, briquetts, pellets, 65%, CaF_2, bulk, c.l., works	ton.	34.00	- —
lump, 59-65% effective CaF_2, bulk, c.l., mine	ton.	40.00	- —
washed gravel, 59-60% effective CaF_2, bulk, c.l., mine	ton.	40.00	- —
60-65% effective CaF_2, bulk, c.l., mine	ton.	40.00	-41.00
65-70% effective CaF_2, bulk, c.l., mine	ton.	42.00	- —
70% or better, effective CaF_2, bulk, c.l., mine	ton.	43.00	- —
Formaldehyde, NF (uninhibited), dms., c.l. E., works	lb.	.066	- —
l.c.l., E. works	lb.	.071	- —
tanks, E. works	lb.	.0430	- —
methanol-free (uninhibited), tanks, works	lb.	.0395	- —

Tankcar and tankwagon prices above are on a delivered basis in New England, Eastern New York, N. J., Eastern Penna., and part of Delaware; in states other than Eastern Seaboard as well as W. of Rockies, prices f.o.b. Texas plants, are .0270 for inhibited and .0245 for uninhibited.

Fleaseed (see Psyllium seed).			
Fringetree bark, bls	lb.	.60	- .81
Fuller's earth, dom., powd., bgs., c.l., Fla., mines	ton.	21.25	- —
Georgia mines, c.l.	ton.	17.00	-18.00
Texas mines, c.l.	ton.	16.00	- —
spent, f.o.b. shipt. pt., c.l.	ton.	4.50	- 5.00
imported, bgs., c.i.	ton.	42.00	- —
Furfural, tech., dms., c.l., works	lb.	.13	- —
l.c.l. works	lb.	15	- —
tanks, works	lb.	.115	- —

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Fusel Oil—Hexalin

Fusel oil, refined, dms., c.l., dlvd lb. .17½- —
l.c.l., dlvd. lb. .18½- —
tanks, dlvd lb. .15 - 15½
Fustic extract, cryst., No. 1, bbls., l.c.l. lb. .47½- —
No. 2, bbls., l.c.l. lb. .45½- —
No. 3, bbls., l.c.l. lb. .43½- —
liquid, No. 1, bbls., l.c.l. lb. .22½- —
No. 2, bbls., l.c.l. lb. .21½- —
No. 3, bbls., l.c.l. lb. .19 - —
solid, No. 1, bxs., l.c.l. lb. .45 - —

G

G salt, 100% basis, bbls., frt alld lb. .73 - —
Gammapicoline, 98%, dms., c.l., works lb. 2.65 - —
Gasoline, tanks, refy., ex tax, Arkansas, 80 octane gal. .1175- —
N. Y. Harbor, 76 octane gal .1415- .146
Group 3, 84 octane gal. .11375- .11625
Gulf coast, 83 octane gal. .11 - .1175
Penn., western U. S. motor, 86 octane gal. .1415- .1425
natural, group 3, 26-70 octane gal. .055 - —
Gelatin, edible, pure (pork skin), 75 Bloom test, fib. dms., c.l lb. .54 - —
150 Bloom test, fib. dms., c.l. lb. .62 - —
200 Bloom test, fib. dms., c.l. lb. .69 - —
225 Bloom test, fib. dms., c.l. lb. .72 - —
275 Bloom test, fib. dms., c.l. lb. .80 - —
Gelsemium root, bls lb. .28 - .29
Gentian root, bls lb. .17 - .20
grd., bbls., bxs lb. .22 - .23
powd., bbls., bxs lb. .23 - .24
Geraniol, extra, cns., dms lb. 1.40 - 2.10
standard, cns., dms lb. .60 - 1.50
Geranyl actetate, cns lb. 1.30 - 2.10
Ginger, oleoresin, NF, from African root, bots lb. 3.75 - 7.50
from Jamaican root, bis lb. 5.00 -12.75
Root, African, bls lb. .13 - .13½
Jamaica, No. 1, bgs lb. .19 - .20
No. 2, bgs. lb. .13½- .14
No. 3, bgs. lb. .12½- .12
Rhattoon, bgs lb. .12 - .12½
Nigerian, split, bgs lb. .10 - .10½
Glauber's salt, anhyd. see Sodium sulphate)
Glue, bone, extracted, 66 jellygrams, bgs., c.l., dlvd lb. .22½- —
80 jellygrams, same basis lb. .23 - —
104 jellygrams, same basis lb. .23½- —
131 jellygrams, same basis lb. .24 - —
164 jellygrams, same basis lb. .24½- —
191 jellygrams, same basis lb. .25 - —
222 jellygrams, same basis lb. .26 - —
packers' 40 jellygrams, bgs., c.l., dlvd lb. .19½- —
65 jellygrams, same basis lb. .20½- —
86 jellygrams, same basis lb. .21 - —
115 jellygrams, same basis lb. .21½- —
135 jellygrams, same basis lb. .22½- —
164 jellygrams, same basis lb. .23 - —
renderers' 110 jellygrams, bgs., c.l., dlvd lb. 20 - —
Bone glue, l.c.l., prices 1c. higher.
hide, 70-94 jellygrams, bgs., c.l., dlvd lb. .26 - —
95-121, bgs., c.l., dlvd lb. .27½- .28
122-149, bgs., c.l., dlvd lb. .29 - .29½
150-177, bgs., c.l., dlvd lb. .30 - .31
178-206, bgs., c.l., dlvd lb. .31 - .32
207-236, bgs., c.l., dlvd lb. .32 - .33
Glue, hide, 237-266 jellygrams, bgs., c.l., dlvd lb. .33 - .34
267-296, bgs., c.l., dlvd lb. .34 - .35
299-330, bgs., c.l., dlvd lb. .35 - .36
331-362, bgs., c.l., dlvd lb. .36 - .37
363-394, bgs., c.l., dlvd lb. .37 - .38
395-427, bgs., c.l., dlvd lb. .38 - .39
428-460, bgs., c.l., dlvd lb. .40 - .41
461-494, bgs., c.l., dlvd lb. .41 - .43
495-529, bgs., c.l., dlvd lb. .42 - .45
Hide glue l.c.l. prices 1c. higher.
Glycerin, nat., crude, saponification, 88%, to refineries, tanks, dlvd. lb. .23 - —
soaplye, 80%, tanks, dlvd lb. .21 - —
refined, BP, 98%, dms., c.l., dvld. lb. .34½- —
l.c.l., dlvd lb. .35 - —
tanks, dlvd lb. .34 - —
dynamite, dms., c.l., dlvd lb. .34½- —
l.c.l., dlvd lb. .35 - —
tanks, dlvd lb. .34 - —
high gravity, dms., c.l., dlvd lb. .34½- —
l.c.l., dlvd lb. .35 - —
tanks, dlvd lb. .34 - —
USP, CP, 95%, dms., c.l., dlvd lb. .33½- —
l.c.l., dlvd lb. .34 - —
tanks, dlvd lb. .33 - —
yellow, distilled, dms., c.l., dlvd lb. .34 - —
l.c.l., dlvd lb. .34½- —
synth., dms., c.l., dlvd lb. .34½- —
l.c.l., dlvd lb. .35 - —
tanks, dlvd lb. .34 - —
Glycine (see Acid aminoacetic).
Glyoxal, 30% dms., c.l. works lb. .18½- —
l.c.l., works lb. .19 - —
tanks, works lb. .18 - —
Gold chloride, acid-brown, bots oz. 22.50 -23.00
acid-yellow, bots oz. 20.00 -20.50
Golden seal root, NF, tested, bls. lb. 2.25 - 2.50
powd., bxs lb. 2.75 - 3.25
Graphite, amorph., powd., bgs., fib. dms., ex whse lb. .06 - .09½
crystalline, 88-90%, powd., bgs., fib. dms., ex whse lb. .19 - .21½
90-92%, powd., bgs., fib. dms., ex whse lb. 21 - .24½
95-97%, powd., bgs., fib. dms., ex whse lb. .29 - .31½
flake, No. 1, 90-95%, bgs., fib. dms., ex whse lb. .29 - .31
No. 2, 90-95%, bgs., fib. dms., ex whse lb. .29 - .31
Grease, brown, tanks, dlvd lb. .03½- —
house, tanks, dlvd lb. .04½- —
white, choice, tanks, dlvd lb. .07¾ Nom.
yellow, tanks, dlvd lb. .04¾- —
Green, brilliant, thioflavin, toner, molybdated, PMA, kgs., works lb. 5.10 - —
tungstated, PTMA, kgs., works lb. 6.30 - —
Chrome, CP, dark, light, medium, blue content 1 to 15%, bbls., dlvd. N. of Tenn. and N. C., E. of Miss., including St. Paul, Minn., Davenport, Rock Island, St. Louis lb. .38 - —
16-30%, bbls., same basis. lb. .39 - —
31-45%, bbls., same basis. lb. .40 - —
45-49%, bbls., same basis lb. .43 - —
50%, bbls., same basis lb. .48 - —
reduced color, 25%, bbls., same gal. .19 - —
Ala., Fla., Ga., La. (Shreveport 1½c.), Miss., N. C., S. C., Tenn., Texas (Dallas, Ft. Worth, 1¼c.; El Paso, 2c.); Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph; 1c. higher dlvd. Pac. coast; for Denver, Pueblo, Salt Lake City, Wichita prices are equalized with Chicago.
Chromimum oxide, hydrated, bbls., dms., c.l., frt. alld. lb. 1.00 - 1.10
pure, bgs., c.l., frt. alld lb. .39¼- —
l.c.l., same basis lb. .39¾- —
Dyes (see Dyes, coaltar).
Malachite, straight, PTMA, bbls., works lb. 4.80 - —
Paris (see Paris green).
Phthalocyanin toner, bbls., works. lb. 4.40 - —
resinated, bbls lb. 4.00 - —
water dispersable, bbls lb. 1.71 - —
Pigment B, kegs lb. 1.35 - —
Grindelia robusta herb, bls lb. .44 - —
Guaiacol, cryst., tins lb. 1.90 - —
liquid, NF, bots., cbys lb. 2.15 - 2.20
Carbonate, dms lb. 3.15 - 3.20
Gum accroides (see Gum yacca).
Aloe (see A.)
Arabic, amber, sorts, bgs. lb. .13½- .15
powdered, USP, bbls lb. .20 - .23
Asafetida (see A).
Asphaltum (see A).
Benzoin, Sumatra, cs lb. .38 - .42
Camphor (see C).
Cellulose, bgs., 23,000-lb. lots or more, works, frt. alld lb. .60 - —
smaller lots same basis lb. .62 - —
Copal, Congo, No. 1, bgs lb. .16 - .18
No. 2, bgs lb. .14 - .16
No. 3, bgs lb. .13 - .14
Manila, C, bgs lb. .32 - .34
CBB, bgs. lb. .22½- .24½
DBB, bgs. lb. .18 - .19
DK, bgs lb. .14 - .16
dust, bgs. lb. .11 - .12½
soft, MA bgs lb. .14½- .16
WS, bgs. lb. .27 - .35
Philippine, pale, chips, bgs lb. .18 - .19
nubs, bgs. lb. .29 - .32
seeds, bgs. lb. .13 - .15
sorts, bgs. lb. .15 - .16
Pontianak, chips, bgs lb. .20 - .22
nubs, bgs. lb. .30 - .32
Dammar, Batavia, A/E, bgs. lb. .26 - .27
dust, bgs lb. .16 - .18
E., bgs. lb. .18 - .20
East India, batu, bold, bgs lb. .13½- .15
nubs and chips, bgs lb. .08½- .10
black, bold, bgs. lb. .14½- .16
unscraped, bgs. lb. .11 - .13
nubs and chips, bgs lb. .11 - .13
pale, chips, bgs lb. .13 - .14
nubs, bgs. lb. .18 - .20
Singapore, No. 1, bgs lb. .38 - .39
No. 2, bgs. lb. .28 - .30
No. 3, bgs. lb. .16 - .17
dust, bgs lb. .16½- .17
seeds, bgs. lb. .18 - .20
Ester, gum-rosin type, dms., c.l., dlvd. Ill., Ind., Ky., Mich., Mid-Atl. States, N.E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W Va lb. .14 - .14½
wood-rosin type, dms., c.l., same basis lb. .14 - —
Guaiac (see Guaiac resin).
Karaya, NF, powd., No. 1, bbls lb. .30 - .35
No. 2, bbls lb. .24 - .28
No. 3, bbls lb. .19 - .21
Kauri, bgs. lb. .30 - .50
Kino, cs lb. 1.50 - 2.40
Locust bean, powd., bgs lb. .30 - .32
Myrrh, cs. lb. .38 - .40
Opium (see O).
Olibanum siftings, cs lb. .15 - .20
tears, cs. lb. .22 - .30
Red (see Gum, yacca).
Rosin (see R).
Sandarac, cks. lb. 2.50 - 3.50
Sterculia (see Gum karaya).
Tragacanth, No. 1, cs lb. 2.85 - 2.90
No. 2, cs lb. 2.45 - 2.50
No. 3, cs lb. 1.60 - 1.70
powdered, USP, bbls lb. 1.25 - 1.35
Yacca, bgs lb. .06 - .09
Gypsum, plaster of paris, 100-lb. paper bags, trucks, dlvd. N. Y. C. ton 20.30 - —
Terra alba, domestic, same basis. ton 19.00 - —
works, N. Y. C. ton 16.00 - —
imported, English, 100-lb. paper bags, ex dock, N. Y. C. ton 55.00 - —
ex warehouse ton 60.00 -62.00

H

Hawthorn berries, bgs. lb. .28 - .32
Heliotropine, cryst., cns lb. 3.10 - 3.65
Hellebore root dom. green, bls. lb. .55 - .65
Helonias root, bls lb. 1.75 - 2.00
Hematine extract, cryst. No. 1, bbls., l.c.l. lb. .47 - —
No. 2, bbls., l.c.l. lb. .43 - —
No. 3, bbls., l.c.l. lb. .41 - —
No. 4, bbls., l.c.l. lb. .39 - —
No 5, bbls., l.c.l. lb. .37 - —
paste, No. 1, bbls., l.c.l. lb. .20½- —
Henbane leaves, bls lb. .40 - .45
Heptane, industrial, tanks, Bayonne, N. J. gal. .19 - —
Baytown, Tex. gal. .14¾- —
Borger, Tex. gal. .14¾- —
Hesperidin methylchalcone, bots., works lb. 50.00 - —
Hexachlorophene, dms lb. 2.60 - —
Hexalin (see Cyclohexanol).

DOW

NEW PAPER CARPET BACKING SAFE FROM MOLD ATTACK

Positive mold control by DOWICIDE PRESERVATIVES makes a new idea practical for carpet manufacturers

The Dow Chemical Company
Dept. DP 3-513
Midland, Michigan

Please send me detailed information on DOWICIDE PRESERVATIVES.

Name_____

Title_____

Company_____

Address_____

City_____ State_____

When your product involves paper, paint or textiles you need DOWICIDE® PRESERVATIVES to combat the inherent problems of mold and bacteria growth. As an example, manufacturers of fine carpeting found that twisted paper twine made a durable backing when protected against mildew attack. This protection was easily and positively provided by treating the paper with a DOWICIDE PRESERVATIVE.

Dow produces fourteen different DOWICIDE PRESERVATIVES to aid you in preventing damaging attacks during the three vital phases in the life of your product—during manufacture, through distribution and into consumer use. Write today for more detailed information. THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW CHEMICALS

DOW

Hexamethylenetetramine, tech., bgs., 1,000-lb. lots or more, Perth Amboy or N. Y. C. lb. .239 - —
smaller lots, same basis....lb. .242 - —
5b dms., 1,000-lb. lots or more, same basis lb. .239 - —
smaller lots, same basis....lb. .249 - —
USP, dms., 500 lb. lots or more, same basis...lb. .40½- —
smaller lots, same basis lb. .41½- —
Hexamine (see Hexamethylene tetramine).
Hexane, industrial, tanks, Bayonne, N. J. gal. .19 - —
Baytown, Tex.....gal. .15½- —
Borger, Tex.....gal. .15½- —
Hexanol, normal, dms., c.l., works, lb. .34½- —
l.c.l., works.....lb. .35 - —
tanks, works.....lb. .33 - —
Hexyl cinnamic aldehyde, dms lb. 2.25 - 7.50
Salicylate dms lb. 1.75 - —
Hexyleneglycol, dms., c.l., dlvd..lb. .16 - —
l.c.l., dlvd.....lb. .17 - —
tanks, dlvd lb. .14 - —
Hexylmethacrylate, normal, dms., less than truckload, works, lb. .71 - —
Hexylresorcinol, USP, dms., 50-lb. lots or more, dlvd lb.14.00 - —
smaller lots, dlvd. lb.14.50 - —
Histamine diphosphate USP, bots. kilo 456.00 - —
Histidine hydrochloride, laevo, NF, 5lb. dms. 50-kilo lots, works kilo 80.00 -85 00
1-5 kilo lots, works.. kilo.90.00 -95 00
Homatropine hydrobromide, USP bots..oz. 9.75 - —
Hydrochloride, bots. oz.20.00 -22.00
Methylbromide, USP, bots.....oz.10.00 -11.00
Hormosal 12 15% ammonia bulk c.l., Chicago unit-ton. 6.00 - —
Horehound herb bls lb .14 .15
Hydrastine bots oz.29.50 -31 00
Hydrochloride, NF, bots .... oz.29.50 -31 00
Sulphate bots oz.35 00 -37.00
Hydrastinine 10-grain bots ... bot 1.95 —
Hydrastis (see Goldenseal.
Hydrazine, free base ret. dms., Niagara Falls lb. 3.00 - 3.30
Hydrate 100% ret. dms., Niagara Falls lb. 1.75 - 1.95
85%, ret. dms., same basis lb. 1.35 - 1.55
Hydroxylamine dms. lb. ctns., works lb. .30 - .40
Hydrogen chloride, anhyd., 50-lb. cyl., c.l., works..lb. .45 - —
l.c.l., works.....lb. .55 - .60
Fluoride, anhyd., cyls., works..lb. .27½- .29
tanks, works.....lb. .21 - —
Peroxide USP dms. dlvd .... lb. .03¾ .05
35%, cbys., dlvd .... lb. .21 - —
dms., c.l., dlvd.....lb. .208 - —
l.c.l., dlvd. .....lb. .213 - —
tanks, dlvd. .....lb. .201 - —
Hydroquinone photo grade bbls. dms. lb. .98 1.00
tech., dms., c.l., frt. equald lb. .77 - —
l.c.l., frt equald lb. .83 - —
Hydroxycitronellal, cns lb. 5.35 - 5.80
Hyoscine salts (see Scopolamine)
Hyoscyamine, bots oz.15.75 -16.00
Hydrobromide, bots oz.16 50 -18 00
Sulphate bots oz.12 00 -13.50
Hypernic extract, cryst., No. 2, bbls., l.c.l. lb. .52 - —
liquid No 1, bbls. l.c.l.... lb. .35 - —
No. 2, bbls., l.c.l. ..... lb. .27 - —

I

Ichthammol, NF, dms ..... lb. .60 - .75
Indian red (see Red, Indian)
Indigo (see Dyes, coaltar, 1171 Indigo synthetic).
Indol CP bots .....lb 17.00 -21 00
Inositol, bots., dlvd.....lb. 5.00 - —
dms., dlvd. .....lb. 4.50 - 4.75
Insect flowers (see Pyrethrum).
Iodine, crude, kgs .....lb. 1.30 - —
resublimed, USP, bots., jars..lb. 2.55 - —
Iodochlorohydroxyquin, USP, dms.lb. 5.90 - —
Iodoform, NF, dms., kgs .....lb. 4.90 - 5.00
Ionone, alpha, cns .....lb. 4.00 - 8.25
Beta, cns .....lb 4.30 -11.25
Methyl, std., dms., cns. .....lb. 3.32 - 4.65
Ipecac root, bgs.....lb. 6.25 - 6.50
powd., bbls., bxs.....lb. 6.75 - 7.00
Irish moss, bleached, prime, bls lb. .30 - .35
Iron acetate liquor, 25° bbls., c.l., works lb. .09 - —
l.c.l., works .....lb. .09¾- —
solut., USP IX, cbys..... lb. .16 - —
djns. ..... lb .17 - —
Cacodylate, NF, bots .....lb.13.00 -14.00
Chloride (ferric), anhydr., tech., dms., c.l., works, 100 lbs. 6.75 - —
l.c.l., works.....100 lbs. 8 00 - —
indust., cryst., bbls., c.l., works ..100 lbs. 4.75 - 5.25
l.c.l., works ..100 lbs. 5.25 - 6.25
USP, cryst., dms., works lb. .07½- .09
Chloride, USP, sol., 42° Be, cbys., c.l., works..100 lbs. 7.25 - 8.25
tanks, frt. equald., basis 100%..100 lbs. 3.20 - —
Citrate, gran., dms.....lb. .86 - —
Gluconate, NF (see Ferrous gluconate, NF).
Glycerophosphiate, NF, powd..lb. 4.75 - 4.85
Hypophosphite, NF, dms.....lb. 2.80 - —
Iodide, bgs lb. 3.66 - 3.73
Naphthenate liq., 6% Fe., dms., frt. alld lb. .25¾- —
Oxalate, gran, dms lb. .85 - .87
Phosphate, NF, soluble, gran., pearls, cs lb. .64 - .68
Pyrophosphate, NF VII, soluble, gran. pearls dms lb. .78 - .81
Resinate, 6.75% Fe, dms., frt. alld, lb. .26¼- —
Stearate, dms., c.l., frt. alld..lb. .37 - —
l.c.l., same basis.....lb. .38 - .42
Sulphate ferric, partially hydrated, bgs., c.l., works..ton.31.75 -33.75
l.c.l., works.....ton.34.75 -40.75
ferrous, tech. (see Copperas).
USP, cryst., bbls., dms.... lb. .09½- .10
Iron-ammonium citrate, brown, N.F., gran., dms..lb. .59 - —
green, USP XII, gran., dms lb. .59 - —
Oxalate, fine gran., dms.....lb. .25½- .28½
Iron-potassium oxalate, fine gran., dms lb. .30½- .33½
Iron-sodium oxalate, fine gran., dms lb. .25½- .28½
Isoborneol, cns.....lb. 1.25 - 1.70
Isobornyl acetate, cns.....lb. .85 - .95
Formate, dms.....lb. .80 - —
Propionate, dms.....lb. 1.15 - 1.45
Isobutyl acetate, perfume grade, cns..lb. .75 - 1.00
solvent grade, dms., c.l., dlvd E. of Rockies..lb. .13¼- —
l.c.l., same basis.....lb. .14¼- —
tanks, same basis .....lb. .11¼- —
Methacrylate, dms., works ....lb. .60 - —
Isobutyraldehyde, dms., dlvd....lb. .50 - —
Isoeugenol, cns.....lb. 3.75 - 4.05
Isoniazid, bulk, powder, 25-kilo lots or more kilo.30.00 -32.00
smaller lots .....kilo.30.00 -32.00
Isonicotinic acid hydrazide (see Isoniazid).
Isopentane, commercial grade, non-ret. dms., f.o.b. Tex. refy..gal. .50 - —
pure .....lb. .50 - —
tech. .....lb. .25 - —

Isophorone, dms., c.l., works....lb. .24¼- —
l.c.l., works.....lb. .24¾- —
tanks, works.....lb. .22½- —
Isopropanol (see Alcohol, Isopropyl).
Isopropyl acetate, dms., c.l., dlvd. lb. .12 - —
l.c.l., same basis.....lb. .13 - —
tanks, same basis .....lb. .10 - —
Alcohol (see Alcohol, Isopropyl).
Benzene (see Cumene)
Ether (see Ether, Isopropyl).
Isopropylamine (see Mono-, Di-, or Tri-)
Isopropylphenol, dms., c.l., works lb. .46 - —
l.c.l., works.....lb. .47 - —
tanks, works.....lb. .45 - —
Isoquinolin, dms., works.....lb. .65 - 1.25

J

Jalap root, NF, bls .....lb. .38 - .55
powd., bbls., bxs.....lb. .49 - .66
Juniper berries, bgs.....lb. .18 - .22
Tar, NF, dms. .....lb. .42 - .70

K

Kaolin (see also Clay, China).
NF, powd., 5lb dms ..... lb. .08 - .16½
colloidal 5lb dms ..... lb. .15 - .15½
Kerosene, tanks, refy., Ark., 42-44 specific gravity, w.w...gal. .09375- —
California, 40-43 s.g., w.w....gal. .138 - .148
Gulf ports, 41-43 s.g., w.w....gal. .09 - .0973
N. Y. Harbor, 43-44 s.g., w.w. gal. .11 - —
Okla.-Tex., 41-43 s.g., w.w gal. .08875- .10
Penn., Western, 45 s.g., w.w. gal. .1155- .12
Kola nuts, bgs.....lb. .09 - .10

L

Lady's slipper root, bls .....lb. 1.70 - 1.75
Lanolin, cosmetic, dms., works..lb. .36 - .42
USP, anhydrous, dms., works..lb. .35 - —
hydrous, dms., works.....lb. .34 - —
Lard, cash, tres., Chicago.....lb. .15¼ Nom.
Larkspur seed bgs .....lb. .20 - .23
Lauryl chloride, dms., c.l., works, frt. equald. lb. .74 - —
l.c.l. .....lb. .75 - —
Methacrylate, normal, dms., less than truckload works lb. 1.00 - —
Lavender flowers, medium, bls lb. .55 - .60
ordinary, bls .....lb. .16 - .20
select, bls .....lb. .90 - —
Lead acetate, white, crystals, bbls, gran. bbls. .....lb. .22 - —
gran. obls .....lb. .23 - —
powd., bbls .....lb. .23 - —
NF cryst., gran., powd .....lb. .31 - .33
Arsenate, acid powder, dealers, 3-lb. bgs., or larger, c.l., frt. alld. on 95 lbs. or more lb. .27½- —
l.c.l., frt alld .....lb. .28½- —
1-lb. bgs., c.l. .....lb. .41½- —
l.c.l. .....lb. .42½- —
Blue, basic sulphate, bbls., c.l., ship't point, frt. alld..lb. .14¾- —
l.c.l., works .....lb. .15¾- —
Carbonate (see Lead, white).
Chloride, dms .....lb. .45 - —
Iodide, NF, V jars .....lb. 3.82 - —
Linoleate, fused, 26.5%, dms...lb. .32½- —
Metal, pigs, prime, N. Y.....lb. .1350- —
St. Louis.....lb. .1330- —

Hexamethylenetetramine—Lead Stearate

Lead, metallic paste, dms., 20,000-40,000 lb. lots, works lb. .31¾- —
10,000-20,000 lb. lots same basis lb. .32¾- —
2,000-10,000 lb. lots same basis lb. .33¼- —
200-2,000 lb. lots, same basis, lb. .33¾- —
Prices ex whse Jersey City, N. J. 4½c per lb higher
Monosilicate, bgs., c.l., works, frt. equald. lb. .1450- —
l.c.l., same basis .....lb. .15 - —
Naphthenate, liquid, 16% Pb, dms., dlvd lb. .17½- —
24% Pb, dms., dlvd .... lb. .23¾- —
solid, 37% Pb, dms., dlvd....lb. .31¼- —
Nitrate, bbls .....lb. .22¼- —
Oleate, fused, bbls.....lb. .29¾- —
Orthosilicate gel, 50% PbO, dms., works lb. .32¼- —
60% PbO dms works lb .31¾ —
Peroxide, powd., tech., bbls... lb. .45 - .47
Phthalate, dibasic, dms., works, lb. .41 - —
Red, 95% Pb_3O_4, or less, bbls., c.l., works, frt. equald...lb. .16 - —
l.c.l., same basis .....lb. .16½- —
97% Pb_3O_4, bbls., c.l., same basis..lb. .16¼- —
l.c.l., same basis .....lb. .16¾- —
98% Pb_3O_4, bbls., c.l., same basis..lb. .16½- —
l.c.l., same basis .....lb. .17 - —
Resinate, precip., dms., dlvd .lb. .23½- —
Salicylate, normal, dms., works lb. .46 - —
Stearate, dibasic, ton lots ...lb. .54 - —
precip., bbls., c.l. .....lb. .38 - —
l.c.l. .....lb. .40 - .44

NOW

From International's New Potash Chemical Plant at Carlsbad, New Mexico

hydrochloric ACID

20° BAUMÉ COMMERCIAL GRADE

★ High Purity . . . from inorganic source . . . to meet all commercial specifications.

★ Large Quantities . . . Prompt Deliveries.

★ Dependable source of supply from a year-around operation.

★ Available in Tank Truck and Tank Car Shipments.

In its recently completed chemical plant at the site of its Carlsbad potash mines, *International* is making the first commercial use of a new process for the production of Hydrochloric Acid from magnesium chloride.

You can depend on *International* for Hydrochloric Acid in the purity and quality to meet your specifications and in quantities to satisfy your requirements.

Mining-Refining-Manufacturing Caustic Potash—all standard grades; Carbonate of Potash—all standard grades; Potassium Chloride—refined and technical grades; Sulfate of Potash; Liquid Chlorine; Ferric Chloride; Hydrochloric Acid.

potash division

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

Address all inquiries to Industrial Sales Dept., Potash Division
General Offices: 20 North Wacker Drive, Chicago 6
61 Broadway, New York 6 • Midland, Texas

Lead Sulphate—Manganese Tallate

Lead sulphate (see Lead blue; Lead white, basic sulphate).
Tallate, liquid, 16% Pb, dms....lb. .16 - —
24% Pb, dms.....lb. .21½- —
White, basic carbonate, bgs., c.l., ship't point, frt. alld..lb. .16 - —
l.c.l., same basis.....lb. .17 - —
basic silicate, bgs., c.l., ship't point, frt. alld..lb. .15¼- .17¾
l.c.l., same basis.....lb. .16¼- .18¾
basic sulphate, bgs., c.l. ship't point, frt. alld..lb. .14¾- —
l.c.l., same basis.....lb. .15¾- —
Lecithin, edible, tech., bleached, non-ret., dms., c.l., works, lb. .15 - .17
l.c.l., same basis.....lb. .15½- .17½
unbleached, non-ret., dms., c.l., same basis..lb. .13 - .15
l.c.l., same basis.....lb. .14½- .16½
Leucine dextro-laevo, dms., works, lb 12 25 -15.00
Licorice extract, mass, cns.....lb. .28 - .40
powd., bbls.....lb. .34 - .46
Root, whole, bbls.....lb. .08 - .12
gran., bbls.....lb. .12 - .17
powd., bbls.....lb. .10 - .15
Lignin extract, tanning grade, bgs., c.l. works lb .05¼- .06½
Lime, agricultural, bulk, works ton.14.50 - —
Chemical (quicklime) lump pebble bulk, Adams, Mass ton.12.50 - —
Annville, Pa.....ton.11.50 - —
Austin, Texas.....ton 9.50 - —
Bellefonte, Pa.....ton.11.50 - —
Buffalo, N. Y.....ton.14.00 - —
Cedar Hollow, Pa....ton.11.50 - —
Duluth, Minn.....ton.12.50 - —
El Paso, Texas.....ton.14.00 - —
Lime, chemical (quicklime), lump, pebble, bulk, Farnams, Mass..ton.14.00 - —
Gibsonburg, Ohio....ton.12.50 - —
Hannibal, Mo.....ton.10.00 - —
Keystone, Ala.....ton.10.25 - —
Kimballton, Va.....ton.10.25 - —
Knoxville, Tenn.....ton.10.50 - —
Lee, Mass.....ton.12.50 - —
Lewisburg, Ohio.....ton.10.00 - —
Limedale, Ark.....ton.10.00 - —
Los Angeles, Cal....ton.25.10 -26.84
Marble Cliff, Ohio...ton.10.00 - —
Martinsburg, W. Va...ton.11.00 - —
Mosher, Mo.....ton.10.75 - —
Nelson, Ariz.....ton.14.50 -23.65
Quincy, Ill.....ton.10.00 -13.00
Reddick, Fla.....ton.13.50 - —
Scotrock, Ala.....ton.10.25 - —
Springfield, Mo.....ton.12.25 - —
Winooski, Vt.....ton.15.50 - —
Woodville, Ohio.....ton.11.50 - —
York, Pa.....ton.15.50 - —
Hydrated, paper bags, Adams, Mass.....ton.15.50 - —
Annville, Pa.....ton.14.50 - —
Austin, Texas.....ton.13.00 - —
Bellefonte, Pa.....ton.14.50 - —
Buffalo, N. Y.....ton.16.00 - —
Cedar Hollow, Pa....ton.14.50 - —
Chicago, Ill.....ton.15.00 - —
Duluth, Minn.....ton.14.00 - —
El Paso, Texas.....ton.17.50 - —
Engle, W. Va.....ton.14.50 - —
Farnams, Mass.....ton.14.00 - —
Gibsonburg, Ohio....ton.13.50 - —
Hannibal, Mo.....ton.12.00 - —
Keystone, Ala.....ton.13.50 - —
Kimballton, Va.....ton.13.50 - —
Lime, hydrated, paper bgs., Knoxville, Tenn.....ton.13.00 - —
Lee, Mass.....ton.15.50 - —
Lewisburg, Ohio.....ton.14.00 - —
Limedale, Ark.....ton.12.00 - —
Marble Cliff, Ohio....ton.13.50 - —
McNeil, Tex.....ton.13.00 - —
Meneminee, Mich.....ton.14.00 - —
Mosher, Mo.....ton.13.00 - —
North Tazewell, Va...ton.12.75 - —
Quincy, Ill.....ton.10.00 -12.00
Reddick, Fla.....ton.16.00 - —
Scotrock, Ala.....ton.13.50 - —
Springfield, Mo.....ton.12.25 - —
Winooski, Vt.....ton.15.50 - —
Woodville, Ohio.....ton.14.50 - —
York, Pa.....ton.14.50 - —
Spray, paper bgs., Adams, Mass. ton 17.00 - —
Annville, Pa.....ton.17.00 - —
Austin, Texas.....ton.13.00 - —
Bellefonte, Pa.....ton.17.50 - —
Carey, Ohio.....ton.11.00 - —
Duluth, Minn.....ton.15.00 - —
Engle, W. Va.....ton.14.50 - —
Farnams, Mass.....ton.14.00 - —
Gibsonburg, Ohio....ton.16.50 - —
Keystone, Ala.....ton.13.50 - —
Kimballton, Va.....ton.13.50 - —
Lee, Mass.....ton.17.00 - —
Lewisburg, Ohio.....ton.16.00 - —
Marble Cliff, Ohio....ton.16.00 - —
McNeil, Tex.....ton.16.00 - —
Meneminee, Mich....ton 14.00 - —
Mosher, Mo.....ton.13.00 - —
North Tazewell, Va...ton.12.75 - —
Reddick, Fla.....ton.16.00 - —
Rockland, Me.....ton.10.00 - —
Springfield, Mo.....ton.12.25 - —
Scotrock, Ala.....ton.13.50 - —
Winooski, Vt.....ton.17.00 - —
Woodville, Ohio.....ton.16.50 - —
York, Pa.....ton.15.50 - —
Lime salts (see Calcium).
Lime-ammonia nitrogen, 20.5% N (see Ammonium nitrate with dolomite).
Limestone grd. bgs. works ton. 3.50 - 4.00
Linalool, ex bois de rose oil, dms. lb. 5.95 - 6.70
ex lignaloe wood oil, dms.....lb. 5.30 - 7.10
Linalyl acetate, ex bois de rose, 90-93%, dms..lb. 5.35 - 6.25
96-98%, dms.....lb. 6.75 - 7.15
ex petitgrain, bots.....lb. 3.90 - 4.85
Lindane, 25% formulation, dealers, cns., works lb. 2.20 - —
dms., works.....lb. 2.10 - —
99%, tech., dealers, dms., works. lb. 2.75 - 3.35
Linden flowers with leaves, bls lb. .34 - .35
without leaves, bls.....lb. .40 - .41
Linseed meal, expeller, 32-34% bulk, Midwest, mills..ton.62.00 - —
extracted, 36%, same basis..ton.57.00 - —
Litharge, com'l. powd., bbls., c.l., works, frt. equald..lb. .15½- —
l.c.l., same basis.....lb. .16 - —
Lithium benzoate dms.....lb. 1.65 - 1.67
Bromide, NF bbls., works, frt. equald lb. 2.10 - 2.75
Carbonate, tech., dms.....lb. .90 - 1.10
Chloride cryst., dms.....lb. 1.22 - 1.28
Citrate, NF, bbls., dms., kgs...lb. 1.60 - 1.64
Fluoride, bbls.....lb. 2.05 - —
Hydride powd., dms., works lb.12.00 -14.00
Hydroxide, monohydrate, dms..lb. 1.10 - 1.25
Salicylate, dms.....lb. 1.60 - 1.70
Lithopone, ordinary, bgs., c.l., dlvd lb. .07½- —
l.c.l., dlvd.....lb. .08¼- .08½
titanated (high-strength), bgs., c.l., dlvd lb. .10 - —
l.c.l., dlvd.....lb. .11 - —
Lithopone prices, Pacific Coast, 1c. per lb. higher.
Lobelia herb, bls.....lb. .45 - —
Lobeline sulphate, bots., works..oz.29.50 -30.00
Logwood extract, crystals, No. 1, bbls., l.c.l lb. .41 - —
No. 2, bbls., l.c.l.....lb. .39 - —
liquid, No. 1, bbls., l.c.l.....lb. .20 - —
No. 2, bbls., l.c.l.....lb. .19 - —
No. 3, bbls., l.c.l.....lb. .18½- —
solid, No. 1.....lb. .35 - —
Lycopodium, cs.....lb. 1.50 - 1.75
Lysine hydrochloride, dextro-laevo, bots kilo 145.00 -149.00

M

Mace, Siauw, No. 1, bls.....lb. .98 - 1.00
West Indian, No. 1, bls.....lb. No Stocks
broken, cs.....lb. No Stocks
Magnesia, calcined, tech., ctns. works lb. .32 - .34¼
synth., runner grade, ctns., works lb. .31 - —
USP, light, ctns.....lb. .24 - .36
heavy, bbls.....lb. .36 - .38
Magnesite, chemical grade, calcined powd., bgs., c.l., works, frt. equald ton.82.50 - —
dead-burnt, standard grain, bulk, c.l., Chewalan, Wash ton.38.00 - —
Magnesium bromide, jars.....lb. .90 - 1.00
Carbonate, tech., bgs., c.l., frt. equald lb. .09½- —
l.c.l., frt. alld lb. .10½- —
bbls., c.l., frt. equald.....lb. .10¾- —
l.c.l., frt. alld.....lb. .11¾- —
kgs, c.l., frt. equald lb. .12 - —
USP, bgs., c.l., frt. equald..lb. .11¼- —
l.c.l., frt. alld lb. .13 - —
l.c.l., frt. alld lb. .12¼- —
bbls., c.l., frt. equald.....lb. .11¾- —
l.c.l., frt. alld lb. .12¾- —
Carbonate, USP, kgs., c.l., frt. equald..lb. .13 - —
l.c.l., frt. alld lb. .14 - —

Magnesium carbonate is quoted frt. alld. to N. J. except to Atlantic, Burlington, Cape May, Cumberland, Gloucestershire, Ocean and Salem counties, and to Phila county, Pa. Frt equald with N. Y. C. on all other destinations.

Chloride, anhyd., lump 95-98%, drums, c.l., works, frt. equald lb. .12¾- —
l.c.l., same basis.....lb. .14 - .15
powd., bbls., works ton.50 00 -
hydrous, flake, dms., l.c.l. works ton. 49 00 -51 00
Gluconate, dms., cns.....lb. 1.30 - 1.37
Glycerophosphate, dms., works lb. 5.40 - 5.50
Hydroxide, NF, medicinals, bbls., dms., kgs lb. .26½- .30
Hypophosphite, dms lb 1.60 - —
Laurate, bbls lb. .46 - .47
Metal, 99.8% ingots, cs., works lb. .27 - —
sticks, cs., works, frt. alld. on carlots lb. .45 - —
Oleate, fused, bbls.....lb. .31 - —
Oxide (see Magnesia, calcined).
Peroxide, 15%, dms., works..lb. 1.00 - 1.05
Phosphate, tribasic, NF, bbls lb. .75 - —
Silicate (see Talc).
Silicofluoride, bbls., works lb. .09 - .10
Sulphate (see Epsom salt).
Stearate, ctns., c.l., frt. alld...lb. .38 - —
l.c.l., same basis.....lb. .39 - .43
Trisilicate, USP, dms., 5,000-lb. lots lb. .38 - —
1,000-lb. lots lb. .40 - —
100-lb. lots lb. .45 - —

Bulky and super grades of magnesium trisilicate, 7c. per lb. higher.

Maleic anhydride, dms., c.l. dlvd. E lb. .27 - .32
l.c.l., dlvd. E.....lb. .28 - .33

Prices on maleic anhydride W. of Rockies, 1½c. higher

Mandrake root, bls.....lb. .32 - .34
Manganese acetate, bbls., dlvd..lb. .35 - —
Arsenate, bgs lb. .16 - —
Borate, tech., bbls lb. .24 - —
Carbonate, bbls., works lb. .21 - —
Chloride, anhyd, dms, works lb. .20 - .23
Dioxide, African, 84-87%, 40,000 to 99,999-lb. lots, paper bgs., grass for net, works. ton.88.00 - —
paper-lined burlap bgs., works ton.91.50 - —
dms., works ton.94.00 - —

Prices for manganese dioxide in 10,000 to 40,000-lb. lots, $3 per ton higher

Gluconate, dms.....lb. 1.79 - 1.93
Glycerophosphate, NF, fib. dms lb. 4.70 - 4.80
Hydrate, bbls., dlvd lb. .33¼- —
Hypophosphite, NF, dms lb 2.00 - —
Linoleate, liquid, 4.35% Mn., dms. lb. .30½- —
solid, precip, 8.2% Mn., bbls lb .33½- —
Metal, cs., dlvd. East.....lb. .30 - .33
Naphthenate, liquid, 6% Mn., dms., frt. alld lb. .27 - —
Oleate, precip., bbls lb. .33½- —
Resinate, fused, 3½% Mn., dms.lb. .21¾- —
precip., dms.....lb. .24½- —
Stearate, ctns., c.l.....lb. .33 - —
l.c.l.....lb. .39 - .40
Sulphate, fertilizer grade, 98%, bgs., c.l., dlvd., S. E ton.80.50 - —
l.c.l., dlvd., S. E.....ton.87.50 - —
Tallate, 6%, dms.....lb. .24¼- —

In fact, Harshaw Driers protect *two* reputations for quality—yours *and* ours. To make sure they do, strict Harshaw manufacturing specifications demand the following tests on every batch of driers produced at our plant:

Metal content
Specific gravity
Color
Viscosity
Total solids content
Flash point (T.C.C.)
Moisture content
Acid value
Miscibility with raw linseed oil
Miscibility with mineral spirits
Benzene insoluble content
Customer's specified tests

Material released for shipment complies with the strict tolerances necessary for top quality.

Remembering these exhaustive tests, you can order your next batch of Harshaw Driers with the full assurance that they *will* help to maintain your reputation for quality.

LIQUID DRIERS
Uversol (Naphthenate) Liquids
Linoresinate Liquids
Lo-Odor Liquids
Linoleate Liquids
Lithos
Octasols
Pastes
Pastalls

SOLID DRIERS
Uversol (Naphthenate) Solids
Linoresinate Solids
Linoleate Solids
Soyate Solids
Fused Resinates

POWDERED DRIERS
Precipitated Resinates
Drying Salts:
Cobalt
Lead
Manganese
Zinc

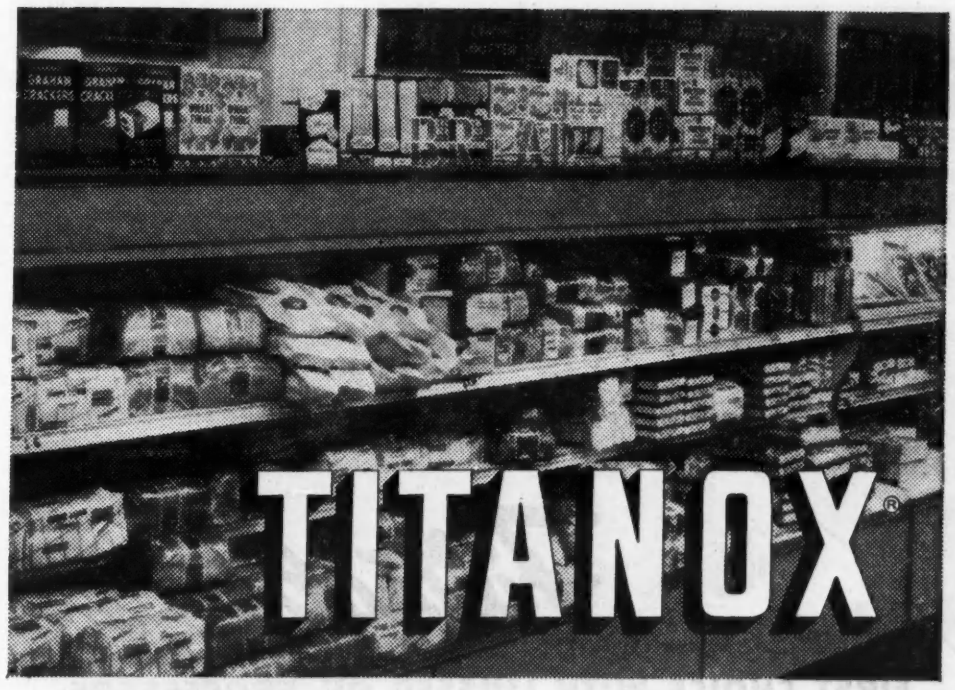
HARSHAW

THE HARSHAW CHEMICAL CO.
1945 East 97th Street, Cleveland 6, Ohio
BRANCHES IN PRINCIPAL CITIES

Mangrove bark, E. African, 38% tannin, c.l., ex dock..ton 77.00 - 78.00
So. American, 30% tannin, c.l., ex dock..ton 57.50 - 59.00
Mannitol, com'l. dms., works....lb. .40 - .42
reagent, 50-lb. dms.. works....lb. .85 - —
Melamine, bgs., ton lots, works...lb. .33 - —
500 to 2,000-lb. lots, works..lb. .33½- —
smaller lots, works.....lb. .38½- —
Menadione, USP, bots ..... gram. .06 - .06¼
Menthol, natural, USP, Brazilian, cs. lb. 5.50 - 5.65
Japanese, cs. .....lb. 7.40 - 7.50
synthetic, USP, racemic, cns .lb. 4.85 - —
Menthyl salicylate, tins ..... lb. 4.00 - 4.25
Mercaptobenzothiazole, bgs., fib. dms. ton lots, works, frt. alld. lb. .38 - —
less ton lots, same basis. lb. .40 - —
Mercaptobenzothiazyl disulphide, bgs., fib. dms., ton lots, works, frt. alld. lb. .48 - —
less ton lots, same basis. lb. .50 - —
Mercury, ammoniated (see White precipitated).
Bichloride (see Corrosive sublimate).
Chloride (see Calomel).
Cyanide, NF VIII, powd. fib. dms. lb 5.29 - —
Iodide, red, NF, fib. dms..... lb. 6.47 - —
yellow, NF, fib. dms..... lb. 6.72 - —
Metal (see Quicksilver).
Oxide, red, NF (see Red precipitate).
tech. (see Red, mercury oxide).
yellow, tech (see Yellow, mercury oxide).
USP fib dms .. .. lb. 4.64 - —
Mesityl oxide, dms., c.l., dlvd....lb. .1350- —
l.c.l., dlvd. .....lb. .1450- —
tanks, dlvd. .....lb. .1150- —
Metaldenyde dms., works. .. lb. .95 - 1.25
Meta-aminophenol, distilled, dms., ton lots lb 2.05 - —
less than ton lots lb. 2.50 - —
Metachloroaniline, dms., c.l., frt. equald. lb. .75 - —
l.c.l., same basis ..... lb. .80 - —
Metacresol 98%, dms., c.l., works lb. .73½- —
l.c.l. works ..... lb. .74½- —
Metanitroaniline dms. frt. alld.. lb. 1.05 - —
Metanitroparatoluidin, bbls.....lb. 1.59 - —
Metaphenylenediamine, kgs. frt. alld. lb. .90 - —
Metatoluidine bbls., c.l., works, frt. alld..lb. .79 - —
l.c.l., same basis ..... lb. .80 - —
tankcars, same basis.....lb. .78 - —
Metatolylenediamine, crystals, fib. dms., frt. alld. lb. .94 - —
powder, fib. dms., same basis. lb. 1.00 - —
Methanol, natural denaturing grade, dms. c.l., frt. alld gal. .78 - —
l.c.l., frt. alld.....gal. .79 - —
tanks, frt. alld.....gal. .70 - —
Prices on natural methanol W of Miss. 3c. higher
synthetic, Zone 1, dms., dlvd..gal. .45 - .45½
l.c.l., dlvd. .....gal. .52 - —
tanks, dlvd .....gal. .32 - .33½
Zone 2, dms., c.l., dlvd....gal. .50½- —
l.c.l., dlvd within established whse. delivery zone..gal. .57 - —
tanks, dlvd. .....gal. .35½- —
Synthetic methanol zones are: Zone 1 is all continental U. S. E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of U. S. west of above state boundaries, comprising Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
Methenamine (see Hexamethylenetetramine)
Methionine, dextro-laevo, fib. dms., frt alld 50-lb or more lb. 4.55 - —
feed grade, 98%, fib., dms., same basis lb 3.00 - —
97%, fib dms, same basis lb. 2.97 - —
Methoxychlor 50% wettable powder, dealers, dms. cs., frt. alld lb. .61 - .64
Methyl abietate, non-ret. dms., c.l., dlvd., zone 1 lb. .19¼- —
l.c.l., same basis .....lb. .20 - —
hydrogenated, zone 1, non-ret., dms., c.l., dlvd.....lb. .20 - —
l.c.l., same basis .....lb. .20½- —
Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio, Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.
Acetone, natural, dms., c.l., E. of Miss., frt. alld..gal. .57 - —
l.c.l., same basis .....gal. .68 - —
tanks, same basis ..... gal. .45 - —
Natural methyl acetone prices W of Miss. 3½c. per gal. higher.
synthetic, dms., c.l., dlvd E..gal. .66½- —
l.c.l. dlvd E .....gal. .72¼- —
tanks, dlvd. E .....gal. .54½- —
Synthetic methyl acetone E. territory is all States East of and including Colo., Mont. N. Mex. and Wyo. West territory is all States West of those four.
Acrylate, dms., c.l., and truckload works lb. .45½- —
less than truckload, works lb. .46 - —
tanks, works .....lb. .42¾- —
Alcohol (see Methanol).
Anthranilate, cns. .....lb. 2.35 - 2.65
Benzoate, cns., dms .....lb. .53 - .65
Bromide, jobbers, cyls., various sizes, works lb. .47 - .61
Chloride, indus., cyl., works..lb. .18 - —
tanks, multi-unit works lb. .14 - —
single-unit works lb. .11½- —
refrigerator mfrs., cyls., dlvd. lb. .40 - .42
other consumers or service men, cyls., dlvd lb. .57 - —
Cinnamate, cns .....lb. 1.43 - 1.80
Cyclohexanol, dms., c.l., works..lb. .35½- —
l.c.l., works .....lb. .36 - —
tanks, works .....lb. .34 - —
Formate, refd., dms.....lb. .35 - .40
tech., non-ret. dms., any quantity, works lb. .08 - —
tanks works ..... lb. .07 - —
Lactate, dms., l.c.l., works... lb. .33 - —
Methacrylate, dms., c.l., and truckload, frt. equald., with Belle, W. Va., and Arlington, N. J. lb. .36½- —
smaller lots, same basis..lb. .37 - —
tanks same basis ..... lb. .35 - —
Parahydroxybenzoate, USP, bots. lb. 2.10 - 2.20
fib dms. ..... lb. 1.90 - 2.00
Roseanilin chloride, NF, fib. dms. lb. 5.44 - —
Salicylate, USP, dms., 500 lbs..lb. .53 - —
cns., 50 lbs .....lb. .58 - —
Testosterone, USP, 100-gm. lots. gm. .79 - —
Methylamyl acetate, dms., c.l., dlvd. E lb. .14¼- —
l.c.l., dlvd. E.....lb. .15½- —
tanks, dlvd. E .....lb. .13 - —
Ketone, dms., works.....lb. 1.05 - —
Methylcellulose, special, vis., (1,500-4,000 cps.) 50-lb bgs., c.l., works lb. .78 - —
2,000-lb. lots and more, same basis..lb. .80 - —
smaller lots, frt. alld. on 100 lbs. .85 - .97
Methylcellulose, standard vis. (15-400 cps.), 50-lb. bgs., c.l., alld..lb. .66 - —
2,000-lb. lots and more, same basis. lb. .68 - —
smaller lots, frt. alld. on 100 lbs. lb. .72 - .85
Methylene blue, kegs, 100-lb. lots, frt adjusted. lb. 3.25 - 3.60
smaller lots, same basis...lb. 3.40 - 3.60
Chloride, industrial, dms., c.l., dlvd. E lb. .13½- —
Methylethylketone, dms., c.l., dlvd. lb. .13 - —
l.c.l., dlvd. .....lb. .14 - —
tanks, dlvd .....lb. .11 - —
Methylethylpyridin, dms. c.l., works. lb. .47½- —
l.c.l. works .....lb. .48 - —
tanks, works .....lb. .46 - —
Methylheptincarbonate, bots.....lb. 30.00 - 42.00
Methylionone, A, cns .....lb 6.55 - 8.80
D, cns. .....lb 7.50 - 9.55
prime, cns. .....lb 4.55 - 6.40
Methylisobutyl carbinol (See Carbinol methylisobutyl)
Ketone, dms., c.l., dlvd.....lb. .15 - —
l.c.l., dlvd .....lb. .16 - —
tanks, dlvd. .....lb. .13 - —
Methylnaphthyl, ketone, cans....lb. 3.60 - 3.95
Methylparaben (see Methyl parahydroxybenzoate).
Methylpentanediol (see Hexyleneglycol).
Methylphenylpyrazolone, dms., 250 lbs., dlvd. lb. 1.70 - —
less than 250 lbs., dlvd....lb. 2.00 - —
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint, plastic, 100 mesh, bgs., c.l., works .....lb. .04¼- —
roofing, 20 to 80 mesh, works lb. .03 - .04
wet-ground biotite, bgs., c.l., works, frt. alld.., E lb. .06¼- —
l.c.l., ex whse. or frt. alld. E..lb. .07 - —
Mica, wet-ground, paint or lacq., bgs., c.l., works, frt. alld lb. .07¾- —
l.c.l., ex whse. or frt. alld. E lb. .08½- —
rubber, bgs., c.l., works, frt. alld. E..lb. .07½- —
l.c.l., ex whse. or frt. alld. E lb. .08½- —
wallpaper, bgs., c.l., works, frt. Alld., E..lb. .07¾- —
l.c.l., ex whse. or frt. alld. E lb. .08¼- —
white, extra fine, bgs., c.l., works, frt. alld. E..lb. .07¾- —
l.c.l., ex whse or frt. alld. E. lb. .08½- —
Mica, wet-grd., W of Miss. R., ½c. higher; W of Rockies, 1c. higher
Milk powder, skimmed, roller, bbls., c.l. lb. .13½- .16.1
spray, bbls., c.l.....lb. .16 - .17.1
whole, roller, bbls., c.l .. lb. No prices.
spray, bbls., c.l.....lb. .34½- .39¼
Sugar, crude, bgs., c.l., works. lb. .18 - —
edible, bgs., 30,000-lb. lots, works lb. .24 - —
2,000-lb. lots, works .....lb. .24¼- —
200-1,800-lb. lots, works....lb. .25¼- —
Edible milk sugar in fib dms., 1c. higher.
USP, fib. dms., 30,000-lb. lots, lots, works lb. .29 - —
2,000-lb. lots, works..... lb. .29¼- —
200-1,800-lb. lots, works lb. .30¼- —
USP milk sugar in bgs. 1c. lower

Mangrove Bark—Monoethylorthotoluidin

Mineral spirits (see Petroleum mineral spirits).
Molasses, blackstrap, feed grade, tanks, New Orleans..gal. .10½- .11
New York .....gal. .12½- —
Molybdenum metal, 99% Mo. pwd., kgs lb 3.00 Nom.
Trioxide, pure, kgs., works, basis Mo. content lb. 1.40 - —
technical, kgs. works, basis Mo content lb. 1.15 - —
Monobutylamine, dms., c.l., E. of Rockies..lb. .55 - —
l.c.l., same basis.....lb. .56 - —
tanks, same basis ..... lb .53 - —
Monochlorobenzene, dms., c.l., frt. alld. or dlvd. E lb. .11½- —
l.c.l., same basis .....lb. .12½- —
tanks, same basis .....lb. .10 - —
Monochlorobenzene prices in the West, 1¼c higher.
Monoethanolamine dms. c.l. dlvd E. lb. .29¾- —
l.c.l., same basis ..... lb .30¾- —
tanks, same basis ..... lb .28 - —
Monoethylalphanaphthylamine, dms., works lb. 1.02 - —
Monoethylamine, 70% contained amine, dms., c.l., dlvd. E. lb. .32 - .33
l.c.l., dlvd. E.....lb. .33 - .34
tanks, dlvd. E.....lb. .30¼- .31
Monoethylaniline dms., c.l., frt. alld. lb. .51 - —
l.c.l., frt. alld.....lb. .52 - —
tanks, frt. alld.....lb. .50 - —
Monoethylorthotoluidin, bbls.....lb. .83 - —



MAKES SALESMEN OUT OF PAPER

In a supermarket, wrappers, labels and packages are salesmen—all competing for recognition by the shopper.

TITANOX titanium dioxide pigments contribute to the display and recognition value of all types of paper used in wrappers and packages. Whiteness, brightness, opacity, color, contrast and other effects are all obtainable with these strongest of white pigments.

Write our Technical Service Department for assistance with your paper pigmentation problems. Titanium Pigment Corporation, 111 Broadway, New York 6, N. Y.; Atlanta; Boston 6; Chicago 3; Cleveland 15; Los Angeles 22; Philadelphia 3; Pittsburgh 12; Portland 9, Ore.; San Francisco 7. In Canada: Canadian Titanium Pigments Limited, Montreal 2; Toronto 1.

1674

TITANOX
the brightest name in pigments

TITANIUM PIGMENT CORPORATION
Subsidiary of NATIONAL LEAD COMPANY

Monoisopropylamine—Oil, Cumin

Monoisopropylamine, dms. c.l., dlvd. lb. .30½- —
l.c.l., same basis lb. .31½- —
tanks, same basis lb. .28½- —
Monomethylamine 25% 40% dms., c.l., frt. equald., basis 100%. lb. .35 —
l.c.l. same basis lb. .31½ .36
tanks, same basis lb. .31 —
Monosodium fluoroacetate (see Sodium fluoroacetate monobasic).
Glutamate (see Sodium glutamate, monobasic
Phosphate (see Sodium phosphate monobasic)
Mono-tertiary butylmetacresol dms., c.l., works lb. .49 · —
l.c.l., works lb. .50 · —
tanks, works lb. .48 · —
Morphine cns oz 12.40 -12.60
Acetate anhyd cns oz 9.95 -10.00
Hydrobromide cns oz 9.90 9.95
Hydrochloride, NF cns oz 9.90 9.95
Sulphate USP cns oz 9.90 10.05
Morpholine dms., c.l., dlvd. E lb. .54¾ —
l.c.l. dlvd E lb. .55¾ —
tanks, dlvd. E lb. .53 —
Musa natural Jonquin grains bots. oz. No stocks.
Synthetic, ambrette, 100-lb. lots, fib. dms lb. 5.15 · —
25-lb lots, cns lb. 5.20 · —
5-lb. lots, cns lb. 5.30 · —
Ketone, 100-lb. lots, fib. dms. lb 5.30 · —
25-lb lots cns lb 5.35 · —
5-lb. lots, cns lb. 5.45 · —
Xylol, 100-lb. lots, fib. dms lb. 1.40 · —
25-lb lots, cns lb. 1.45 · —
5-lb. lots, cns lb. 1.50 · —

Mustard seed, Danish, yellow, bgs. lb. .11 · .11½
Dutch, yellow, bgs lb. .10½- .11
English, yellow, bgs lb. .11 · .12
Myrobalans, J-1, assorted, bgs., ex dock ton. 48.00 Nom.
crushed, bgs., ex dock ton. 61.50 · —
ordinary, bgs., ex dock ton. 44.00 · —
extract, Indian, solid 53% tannin, ex dock, plus duty lb. .07¼- —

N

Naphtha, painters (see Petroleum naphtha V. M. & P.).
Solvent (see S).
Naphthalene, crude, dom., 74° tanks, frt equald lb. .0625- —
78° dms. c.l., same basis lb. .0765- —
l.c.l. same basis lb. .0790- —
tanks, same basis lb. .0675- —
imported, 78°, large lots lb. .03¼- .03½
refined, dom., industrial, bbls., c.l., frt. equald. lb. .11¾- —
bgs., c.l., same basis lb. .11¼- —
tanks, same basis lb. .10¾- —
balls, flakes, wholesalers, jobbers, bbls., c.l., same basis lb. .14½- —
cs. 50 lbs., c.l., same basis lb. .14¾- —
1-lb pkgs. c.l., same basis lb. .17 · —
Neocinchophen, USP, dms., frt. adjusted lb 7.00 · 8.00
Neomycin 6b. dms., 100-kilo lots, basis, activity gm. .60 · —
1-kilo lots, basis, activity gm. 1.20 · —

Nepheline syenite, glass, 24 mesh, bulk, works ton. 14.25 · —
pottery, 200 mesh, bulk, works, N.Y ton. 18.25 · —
Nepheline syenite in bgs., $3 per ton higher than bulk.
Nerolin, cns lb. 2.15 · 2.65
Niacin (see Acid nicotinic).
Niacinamide (see Nicotinamide).
Nickel acetate, bbls., dlvd lb. .75 · .88¼
Carbonate, bbls., dlvd lb. .71 · .78
Chloride, bbls., dlvd lb. .37 · .45
Formate, bbls., ton lots, frt alld. lb. .64 · .65
Metal, electro cathodes, cs., works lb. .60 · —
Nitrate, bbls., works lb. .36 · .37
Oxide, black, bbls lb. .69 · —
Sulphate, bgs., c.l., dlvd lb. .29 · —
l.c.l., dlvd lb. .29½- .37
Nicotinamide, USP, dms., frt. adjusted kilo. 12.00 -12.30
Hydrochloride, dms., frt. adjusted. kilo. 11.50 -11.80
Nicotine sulphate, 40%, dealers, 50-lb. dms., frt. alld lb. 1.11 · —
10-lb. tins, 6 to a case, frt. alld., on 200 lbs lb. 1.20 · —
manufacturers, 500-lb. dms., frt. alld lb. .925 · —
Niger seed, bgs lb. .12 · .12½
Nikethamide, cbys lb. 7.50 · 8.00
Nitrobenzene, dbl. dist., dms., c.l., frt. alld lb. .12 · —
l.c.l., frt. alld lb. .13 · —
tanks, frt. alld lb. .11 · —
Nitrocellulose, ester-soluble, 30-35 cps., ¼, ½, ¾, 5-6, 15-20, 30-40, 60-80, 125-175, secs., bbls., c.l., works lb. .33 · —
l.c.l., same basis lb. .34 · .36
18-25 cps., bbls., c.l. lb. .35 · —
l.c.l., same basis lb. .36 · .38
Nitrocellulose, ester soluble 250-400, 600-1,000 secs., bbls., same basis lb. .42 · —
l.c.l., same basis lb. .43 · .45
spirit-soluble, 30-35 cps., ¼, ½, sec., bbls., same basis lb. .45 · —
t.c.l., same basis lb. .46 · .48
5-6, 40-60 secs., bbls., c.l., same basis lb. .44 · —
l.c.l., same basis lb. .45 · .47
Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable.
Nitroethane, dms., dlvd. E. of Rockies lb. .25 · —
Nitrogen solution, tanks, works, 37-40.8% N, basis 100% ton. 128.00 · —
Nitrogenous process tankage bulk, works unit-ton. 3.50 - 3.75
Sewage sludge, bulk, works unit-ton. 3.75 - .50
Nitromethane, dms., l.c.l., dlvd. E. of Rockies lb. .25 · —
Nitropropane 1, dms., dlvd. E. of Rockies lb. .23¾- —
2, dms., dlvd. E. of Rockies lb. .25 · —
Nonylphenol, dms., c.l., works lb. .33¼- —
l.c.l., works lb. .33¾- —
tanks, works lb. .32¼- —
Nutgalls, Aleppo, bgs lb. .38 —
Chinese, bgs lb. .45 Nom.
Nutmeg, East Indian, whole, cs. lb. .34 · .35
shrivels, bgs. lb. .33 · .34
West Indian, bgs. lb. .25½- .26
Nux vomica, bls lb. .10 · .12
powdered, bbls., bxs lb. .15 · .17

O

Octane, industrial, tanks, Bayonne, N. J. gal. .19 · —
Baytown, Tex. gal. .15¾- —
Borger, Tex. gal. .15¾- —
Octanol, normal, tech., dms., c.l., dlvd lb. .35 · —
l.c.l., dlvd lb. .37 · —
tanks, dlvd lb. .32½- —
Octyl methacrylate, normal, dms., less than truckloads, works. lb. .83 · —
Octylphenol, dms., c.l., works lb. .26¾- —
l.c.l., works lb. .27¼- —
tanks, works lb. .25¾- —

(Essential oils prices listed below are f.o.b. New York, with differences between high and low quotations due to differences in quantity, quality or in individual suppliers' views.)

Oil, abies siberica, cns lb. 2.05 - 3.00
Almond, artificial, bitter (see Benzaldehyde)
natural, bitter, F.P.A., bots lb. 3.00 - 3.40
NF, bots. lb. 3.25 - 3.75
sweet, USP, dms., cns lb. .49 - .90
Allspice (see Oil, pimenta).
Amyris, dms. lb. 1.40 - 1.90
Angelica root, bots lb. 70.00 -120.00
seed, bots lb. 55.00 -95.00
Anilin (see A).
Anise, USP, dms lb. 2.75 - 3.00
Apricot, kernel, USP, dms lb. .37 · .46
Avocado, cns lb. 3.25 · —
Babassu, crude, tanks lb. No stocks.
Bay, NF, Puerto Rican, 50-55%, cns lb. 1.45 - 1.90
55-60%, cns. lb. 1.65 - 2.10
West Indian, 50-55%, cns., dms. lb. 1.45 - 2.25
Bergamot, artif., cns lb. 2.90 - 5.00
natural, NF, Italian, cns lb. 10.50 -12.50
Birchtar, crude, cns lb. 1.75 - 2.00
rectified, NF cns lb. 2.50 · —
Bois de rose, Brazil, dms. lb. 3.95 - 4.25
Mexican (see Oil, lignaloe wood).
Bone, dms., works lb .65 · .70
Cajeput, redist., USP, cns lb. 2.25 - 3.00
tech., cns. lb. 1.90 - 2.75
Calamus, bots lb. 19.00 -20.00
Camphor, sassafrassy, dms. lb. .20 · .40
white, dms lb. .19 · .45
Cananga, native, cns lb. 8.85 -10.75
rectified, cns. lb. 12.50 -13.75
Capsicum (see Capsicum oleoresin).
resin).
Caraway, NF, cns lb. 2.35 - 3.30
Cardamom, NF, bots lb. 29.00 -40.00
Cassia, USP (see Oil, cinnamon, USP).
Castor, blown, dms., c.l. lb. .2300- —
l.c.l. lb. 2450- —
dehydrated, bodied, dms., c.l., lb. .2610- —
l.c.l. lb. .2660- —
tanks lb. .2510- —
unbodied, dms., c.l. lb. .2460- —
l.c.l. lb. .2510- —
tanks lb. .2360- —
hydrogenated, bgs. lb. .2800- .2860
No. 1, Brazilian, tanks lb. .17¼- —
USP, dms., c.l. lb. .2100- —
l.c.l. lb. .2150- —
tanks lb. .2000- —
refined and deodorized, dms., c.l. lb .2250- —
l.c.l. lb. .2300- —
tanks lb. .2150- —
No. 3, tech., dms., c.l. lb. .2075- —
l.c.l lb. .2125- —
tanks lb. .1975- —
sulphonated 50% (48% fat), dms., l.c.l. lb. .14 - .14½
75% (60-62% fat), dms., l.c.l. lb 19½- .20
Cedarleaf, cns., dms lb. 2.00 · 3.00
Cedarwood, cns., dms lb. .45 · .75
Celery seed, bots lb. 15.75 -21.00
Chamomile, blue, Hungarian, bots. lb. 175.00 -280.00
Chaulmoogra, NF, cns., dms. lb. .55 · .70
Chinawood (see Oil, tung)
Cinnamon bark, bots lb. 18.50 -60.00
leaf, cns. lb. 1.25 · 3.25
USP, cns., dms., (Cassia) lb. No stocks.
Citronella, Ceylon, cns., dms lb. .50 · .85
Java, true dms. lb. .65 · .70
Java-type, cns lb. .50 · .85
Clove, USP, from buds, cns., dms lb. 6.50 -10.75
Coconut, crude, tanks, N. Y lb. .16¾- —
Pac. Coast lb. .17 · —
refined, Cochin type, tax incl., ret. dms., l.c.l. lb. .25 · —
deodorized, tax incl., non-ret. dms., c.l. lb. .27¾- —
Cod, Newfoundland, dms lb. .09½- .10
Codliver, USP, dms. gal. 1.55 - 1.65
Copaiba, cns. lb. 1.80 - 2.50
Coriander, USP, bots lb. 17.00 -23.50
Corn, crude, tanks, works lb. .14⅜- —
foots (soapstock), acid, 95%, tanks, N. Y. lb. .04 · —
refined, salad, dms lb. .19⅜- .19⅝
tanks lb. .17½- —
Costus, bots. oz. 9.00 -25.00
Cottonseed crude, tanks, South-East lb. .13⅝ Nom.
Valley lb. .13½- .13⅝
Texas lb. .13¼- —
foots (soapstock), acid 95%, tanks, N. Y. lb. .02¾- —
raw, 30%, tanks, same basis lb. .01¼- —
refined, salad, dms lb. .19¼- .19½
tanks lb. .17¾- —
Creosote (see Creosote, coaltar).
Croton, cns lb 4.30 5.20
Crude (see Petroleum, crude).
Cubeb, cns lb. 4.50 - 6.00
Cumin, bots lb. 4.50 - 5.25

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Oil, cypress, bots.....lb. 5.30 - —
Degras (see D).
Dilliseed, bots.....lb. 2.80 - 3.75
Dillweed, dom., dms., bots....lb. 3.85 - 5.25
Dip (see D)
Erigeron, cns.....lb. 5.50 - 7.50
Eucalyptus, NF, rectified, 70-80%, dms..lb. .80 - .95
80-90%, dms.....lb. .82 - 1.25
Fennel, sweet, USP, cns.....lb. 2.25 - 3.25
Fir, Canada, cns.....lb. 2.65 - 3.10
Fish, refined, alkali, dms.....lb. .1400- .1500
kettle-bodied, dms.....lb. .1580- .1680
light-pressed, dms.....lb. .1250- .1350
tanks.....lb. .11 - —
Fishliver, crude, for feeds or concentrating, 4,000 to 12,000 A units per gm., dms., 1,000,000 units. .08 - .09
10,000 to 20,000 A units per gm., dms. 1,000,000 units. .09 - .10
25,000 to 35,000 A units per gm., dms 1,000,000 units. .09 - .10
40,000 to 55,000 A units per gm., dms. 1,000,000 units .10½- .11
100,000 A units per gm., dms. 1,000,000 units. .12 - .14
200,000 A units per gm., dms. 1,000,000 units. .12 - .14
300,000 A units per gm., dms. 1,000,000 units. .12 - .14½
400,000 A units per gm., dms. 1,000,000 units. .12 - .14½
500,000 A units per gm., dms. 1,000,000 units. .12 - .14½

Prices above are based on the USP XIV method of conversion, Morton-Stubbs Corrected E x 1900.

Fusel (see F).
Garlic, pure, bots.....oz. 9.00 -10.50
Gaultheria (see Oil, wintergreen).
Geranium, Algerian, cns.....lb. 8.75 -11.00
Bourbon, cns.....lb.10.60 -13.50
Turkish (see Oil palmarosa)
Ginger, dist., bots.....lb.10.00 -13.00
Grapefruit, dms.....lb. 2.90 - 3.25
Grease, No. 1, dms.....lb. .10 - .11
extra, winter, strained, dms..lb. .13½- .14
prime, burning, dms.....lb. .15 - .16
Guaiacwood, cns.....lb. 1.40 - 1.90
Hemlock, cns.....lb. 2.10 - 2.50
twice rectified, bots.....lb 3.60 4.00
Tar, NF (see Juniper tar).
Wood tech cns lb 42 50
Juniper berry, NF, VIII, bots..lb. 2.75 - 4.00
Lard (see Oil, grease).
Laurel leaf, dms., cns.....lb. 9.75 -12.50
Lavandin, dms., cns.....lb. 1.95 - 2.50
Lavender, flower, USP, French, 30-32% ester, cns.....lb. 2.50 - 4.50
38-40% ester, cns.....lb. 5.25 - 7.25
40-42% ester, cns.....lb. 5.60 - 7.35
Spike, Spanish, cns.....lb. 1.50 - 2.00
Lemon, USP, Calif., cns., dms..lb. 7.10 - 7.50
Messina, cns.....lb. 6.75 - 9.75
terpeneless, bots.....lb.32.00 -85.00
Lemongrass, cns., dms.....lb. .95 - 1.40
Lignaloe wood, Mex., cns.....lb. 3.25 - 4.25
Lime, distilled, Mexican, cns..lb. 5.25 - 6.50
West Indian, cns.....lb. 5.90 - 7.25
expressed, West Indian, cns..lb. 7.75 - 8.50
terpeneless, bots.....lb.29.50 -100.00
Linseed, raw, dms., c.l., N. Y..lb. .1875- —
l.c.l.....lb. .1925- .1975
tankcars, f.o.b. Minneapolis.lb. .1600- —
New York.....lb. .1725- —
tankwagon, New York.....lb. .1755- —
Boiled linseed oil, .006c per lb. higher.
Mace, dist., cns., dms.....lb. 2.45 - 4.25
Mandarin, Floridian, dms.....lb. 3.00 - 5.35
Italian, cns.....lb. 6.00 - 8.50
Menhaden, crude, tanks, Altantic Coast..lb. .06¾- —
Gulf ports.....lb. .06¾- —
Mineral, white (see Oils, white, mineral)
Mirbane (see Nitrobenzene).
Mustard seed, nat., dms.....lb. .17½- .18
synthetic, cns, dms lb 1.60 1.85
Neatsfoot, 15°, cold test, dms.....lb. .33 - .34
20° cold test, dms.....lb. .32 - .33
30° cold test, dms.....lb .30 - 31
Neroli, NF, French, bots.....lb.160.00 -250.00
petale, bots.....lb.38.50 -150.00
Nutmeg, USP dist., East Indian, cns., dms lb 2.85 - 3.65
West Indian, cns., dms lb 2.60 - 3.65
Ocotea cymbarum, dms.....lb. .70 - .95
Oiticica, liquid, dms.....lb. .19½- .20½
tankcars.....lb. .18 - .18¼
Oleo, extra, dms.....lb. .18¾ Nom.
Olibanum, bots.....lb. 5.50 - 7.65
extra fine nuts.....lb 6.00 - —
Olive, commercial, dms.....gal. 2.35 - —
edible, dms., duty paid.....gal. 2.60 - 2.70
Orange, sweet, dist., cns.....lb. .40 - .80
expressed, USP, Brazilian, cns., dms lb No stocks.
Calif., cns., dms.....lb. .76 - 1.25
Florida, cns., dms.....lb. .68 - 1.25
Messina, cns.....lb. 3.85 - 5.85
West Indian, cns.....lb. 2.75 - 4.00
sesquiterpeneless, bots.....lb.135.00 150.00
Origanum, Spanisn, cns.....lb. 2.00 - 2.75
Palm, clarified, dms.....lb. .12½- .13
Palm kernel, in bond, tanks..lb. .16 Nom.
Palmarosa, cns.....lb. 4.85 - 6.25
Paraffin, pale, 100-110 vis., at 100 F tanks, East Coast refinery gal .14 —
Patchouli, dms.....lb. 7.25 - 9.25
Peach kernel, USP (see Oil apricot kernel).
Peanut, crude, tanks, f.o.b. mills.....lb. .20½- —
refined, dms.....lb. .27¼- .27½
tanks.....lb. .25¾ Nom.
Pennyroyal, USP, imported, cns.....lb. 1.60 - 2.40
Peppermint, natural, dms.....lb. 4.50 - 6.35
redist., USP, dms.....lb. 4.90 - 7.25
Persic USP (see Oil apricot kernel)
Petitgrain, South American, cns., dms..lb. 2.40 - 2.70
Pimento berry, NF, dms.....lb. 4.35 - 5.50
leaf, cns.....lb. 2.25 - 3.00
Pine, dest., dist., dms., extra, c.l., works gal. .73¼- —
l.c.l.....gal. .76½- —
ex whse.....gal .95½- —
steam dist, dms., ex whse., N.Y.C lb. .143 - —
Pineneedle Siberian (see Oil, abies siberica).
Putty, petroleum, dms., c.l., dlvd.....lb. .11 - —
l.c.l. same basis.....lb. .12 - —
tanks, same basis.....lb. .10 - —
Rapeseed, tankcars.....lb. .16¼- —
Red (see Acid, oleic).
Rice bran., clarif., dms.....lb. .16½- .16¾
tanks, dlvd. E.....lb. .14½- —
Rose natural, Bulgarian, bots oz.55.00 -62.25
Rosemary Spanish, tech. cns., dms..lb. .60 - .70
USP, cns., dms.....lb. .75 - 1.00
Rue, bots.....lb. 1.70 - 2.50
Safflower dms, c.l. Atlantic coast.....lb. .17 - —
tanks, same basis.....lb. .15½- —
Sage, clary bots.....lb.20.00 -25.00
Dalmatian, cns.....lb. 7.30 - 8.25
Spanish cns.....lb .90 1.25
Sandalwood, NF, cns.....lb. 9.25 -11.50
Sardine crude tanks Pac. coast lb No stocks.
Sassafrass, artificial, dms.....lb. .42 - .70
natural Brazilian (See Oil, scotes cymbarum)
domestic, USP, cns., dms..lb. 1.75 - 2.25
Savin, cns.....lb. 2.75 —
Savory, cns.....lb No stocks.
Sesame, refd., dms.....lb. .36 - .37

Oil, shingle stain, tar distillate, dms., c.l., works..lb. .33 - —
l.c.l., works.....lb. .35 - —
tanks, works.....lb .23 —
Snakeroot, Canada, cns.....lb.29.50 -33.00
Soybean, crude, tanks, mills....lb. .13¾- —
foots (soapstock), acid, 95%, tanks, N. Y..lb. .05 Nom.
raw, 50% tanks, N. Y.....lb. .02 - —
refined, alkali, dms., c.l...lb. .17½- .18
tanks..lb. .16 - —
clarified, dms., c.l.....lb. .17 - .17½
tanks.....lb. .15½- —
salad, dms.....lb. .16¼- —
tanks.....lb. .17¾- .18½
Spearmint, USP, dms.....lb. 5.75 - 6.55
Sperm, bleached winter, 45°, dms.....lb. .1375- .1450
tankcars.....lb. .1200- —
natural winter, 45° dms.....lb. .1275- .1325
tankcars.....lb. .1100- —
Spruce, cns., dms.....lb. 2.10 - 2.75
Sweet birch, USP, Northern, cns.....lb. 4.95 - 9.50
Southern, cns.....lb. 2.00 - 3.00
Tall, crude, tanks, works.....ton.45.00 -
refined, dms., c.l., works..lb. .06¼ .07¼
l.c.l., works.....lb. .06½ .07½
tanks, works.....lb. .05 .06
Tallow, acidless, dms.....lb. .12½- .13
Tansy, dms.....lb 8.25 9.00
Tar, pine, com'l, dms., extra, c.l., works gal. .42½- —
l.c.l., works.....gal. .50½- —
whse.....lb. .0678- —
tanks, works.....gal. .33½- —
rectified, NF, dms. incl., l.c.l., works, South..gal. .90 - —
whse., N.Y.C.....gal. 1.00 - —
Tar acid (see T)
Theobroma (see Cocoa butter)
Thyme, NF, red, cns., dms..lb. 1.70 - 3.75
white, cns.....lb 1.95 4.00
tech., white, cns.....lb. .40 - 1.85

Oil, tung, dms., c.l., N. Y.....lb. .26 - —
l.c.l., same basis.....lb. .26½- .27
tanks, N. Y.....lb. .24½- —
domestic, mills.....lb. .24½- —
Turkey red (see Oil, castor, sulphonated).
Turpentine, NF, cns., dms.....lb. .20 - .45
Vetiver, Bourbon, cns.....lb.17.90 -20.50
Haitian, cns.....lb.13.00 -16.00
Java, cns.....lb.25.00 -40.00
Wheat germ, 5-gal. dms.....gal.10.00 -13.00
White mineral, tech., 50-65 vis., non-ret. dms., f.o.b. N. Y., c.l.....gal. .51½- .54½
65-75 vis., same basis, l.c.l.....gal. .52½- .55
l.c.l.....gal. .57½- .58½
NF, 80-90 vis., same basis, c.l.....gal. .53½- .56½
l.c.l.....gal. .58½- .59½
125-135 vis., same basis, c.l.....gal. .59½ .62½
l.c.l.....gal. .64½- .65½
145-155 vis., same basis, c.l.....gal. .66 - .68½
l.c.l.....gal. .71 - .71½
175-185 vis., same basis, c.l.....gal. .69½ .73
l.c.l.....gal. .74½ .75
USP, 200-210 vis., same basis, c.l.....gal. .72½- .75
l.c.l.....gal. .77½- .78
345-355 vis., same basis, c.l.....gal. .77 - .80
l.c.l.....gal. .83 - .85
Wintergreen, USP, nat., Northern, cns lb. 7.15 -14.50
Southern, cns lb. 3.20 -19.50
synthetic (see Methyl salicylate)
Wood (see Oil tung).
Wormseed, cns.....lb. 7.70 - 9.95
Wormseed, cns.....lb. 6.50 - 8.60

Oil, ylang-ylang, Bourbon, bots..lb.20.00 -30.00
extra, bots.....lb.30.00 40.00
Madagascar bots.....lb No stocks.
Oleostearine, bbls.....lb. .13¾ Nom
Olivine aggregate, bulk, c.l., mines, 8x8 crushed 8 mesh bulk c.l works.....ton. 7.00 - 9.50
ton 10.00 —
paper, bgs, c.l., works.....ton 12.05 —
Opium, USP, cns.....lb.15.20 19.45
gran., USP, cns.....lb 21.65 24.59
powd., USP cns.....lb 21.65 21.90
Orange, cadmium (lithopone bbls, frt. alld. E. of Rockies.....lb. 1.59 - —
Chrome, CP bbls, dlvd N. of Tenn and N. C. & of Miss. R., include Davenport, Penn. and N. C. E. of Minneapolis, Rock Island, St. Louis, St. Paul.....lb .31 —
Chrome orange prices are ½c higher dlvd Ala., Fla., Ga., La. (Shreveport) 1½c, Miss., N. C., S. C., Tenn., Dallas and Ft. Worth, Tex. 1½c, El Paso, Tex. 4c, Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph, 1½c higher dlvd. Pac. Coast, for Denver, Pueblo, Salt Lake City, Wichita prices are equalized with Chicago.
Dinitroanilin toner.....lb. 1.30 —
Mineral, American, bbls, l.c.l., works.....lb. .1910- —
Molybdated, bbls.....lb .46 —
Orthonitroanilin toner, kgs.....lb 1.15 —
Persian, bbls.....lb. .65 - —
Peel, bitter, Haitian, bls.....lb 12 14
sweet, bls.....lb .16 18
Orris root, Florentine, bls.....lb .28 .30
powdered, bbls, bxs.....lb .35 .38
Verona, bls.....lb. .19 - .20
powdered, bbls., bxs.....lb. .26 - —

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Orthoaminobiphenyl, dms., c.l., works lb. .32½- —
i.c.l., same basis lb. .33 - —
tanks, same basis lb. .37 - —
Orthoanisidin, bbls. lb. .88 - —
Orthochloroaniline, dms., c.l. lb. .70 - —
l.c.l. lb. .72 - —
Orthochlorobenzaldehyde, dms., works lb. 1.20 - —
Orthochloroparanitroanilin dms. dlvd lb. .86 - —
Orthochlorophenol dms. c.l., frt. equald lb. .34½- —
l.c.l. same basis lb. .35½- —
Orthocresol, pure, 30° C., non-ret., dms. c.l. frt. equald lb. .173 - —
l.c.l same basis lb. .176 - —
ret. dms., c.l., same basis lb. .17 - —
l.c.l., same basis lb. .17½- —
tanks, same basis lb. .13 - —
29°C., ret. dms. c.l., same basis. lb. .16 - —
l.c.l. same basis lb. .16½- —
tanks, same basis lb. .15 - —
25-29°C., non-ret. dms., c.l., same basis lb. .153 - —
l.c.l. same basis lb. .156 - —
tanks same basis lb. .140 - —
Orthodichlorobenzene, dms. e.t., works frt. alld E. of Rockies lb. .12¼- —
l.c.l., same basis lb. .13¼- —
tanks same basis lb. .10¾- —
Orthoisopropyl N phenylcarbamate (See IPC).
Orthonitroanilin, flaked, dms. lb. .54 - .57
powd., dms. lb. .60 - —
Orthonitrochlorobenzene dms lb. .20 .21
Orthonitrophenyl tech. dms. c.l., works lb. .14½- —
l.c.l., works lb. .15 - —
tanks, works lb. .13 - —
Orthonitroparachlorophenol, cns lb. .75 - —
Orthonitrophenol, bbls, works, frt. equald lb. .94 - —
Orthonitrotoluene dms., c.l., frt. alld. lb. .10 - —
l.c.l., frt. alld lb. .11 - —
tanks, frt. alld lb. .09 - —
Orthophenetidin dms., works lb. 1.00 - —
Orthophenylphenol fib dms., works. lb. .20 - .44
Ortho-tertiary-amylphenol, dms., c.l., works lb. .43¾- —
l.c.l., works lb. .46¾- —
tanks, works lb. .41¾- —
Orthotolidin (see Tolidin Base).
Orthotoluidin, dms., c.l., works lb. .23 - —
l.c.l. same basis lb. .24 - —
tanks, same basis lb. .22 - —
Osage orange, crystals, No. 1, bbls., l.c.l lb. .40 - —
extract, liquid, No. 1, bbls., l.c.l lb. .19 - —
Ouabain, USP, bots gram 3.00 - 4.00
Ox bile, extract, powdered USP 5-lb. lots or more lb. 6.00 - —
not extract, powdered 5-lb. lots or more lb. 4.35 - —
Oxyquinolin sulphate, cns., 100-lb. lots, works lb 4.75 - 5.00
smaller lots, works lb. 4.92 - 5.17

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Pancreas substance, assay 1:75 bots., 5-lb. lots or more lb 5.75 - —
Pancreatin USP bots lb 2.50 - 3.00
Panthenol, bots., works, frt adjust. kilo 90.00 - —
Papain, powd., African lb. 7.00 - —
Ceylon lb. 5.50 - —
Papaverine, natural or synthetic hydrochloride, USP, cns., 25 oz. to 100 oz., lots oz. 5.00 - —
smaller lots oz. 5.05 - 5.20
Sulphate, cns oz. 7.10 - 7.35
Paprika, Czech, bgs lb. No Stocks
Spanish, bgs lb. .45 - .46
Para-anisidin, dms., works lb. .97 - —
Para-acetylaminobenzaldehyde thiosemicarbazone, dms., frt. adjusted lb. 17.50 - 21.00
Para-aminophenol, dms., frt. alld lb. .97 - .98
Parachloroaniline, dms., c.l., works, frt. equald lb. .75 - —
Parachlorobenzaldehyde, dms., works lb. 1.33 - 1.36
Parachloro-orthonitroanilin, dms., frt. alld lb. .73 - .82
Parachlorophenol, dms., c.l., frt. equald lb. .34½- —
l.c.l., same basis lb. .35½- —
Paracresol, 98%, dms., c.l., dlvd lb. .49 - —
l.c.l., dlvd. lb. .51 - —
Methylether, cns lb. 1.90 - 2.50
Paracymene, dms., 50-gal. lots or more, works gal. 2.50 - —
smaller lots gal. 3.00 - —
Paradibromobenzene, bgs. 500-lb. lots. lb. .55 - —
Paradichlorobenzene, dms., c.l., works, frt. alld. E. of Rockies lb. .16½- —
l.c.l., same basis lb. .17½- .18½
Paraffin, crude scale, white, 121°-123°F, ASTM, solid, c.l., ref'y lb. .06 - —
fully refined, 122-124 ASTM, loose, c.l., rfy lb. .0795- —
125°-127°F, ASTM, loose, c.l., rfy lb. .0795- —
Paraffin, fully refined, 130°-132°F, ASTM, loose, c.l., ref'y lb. .0805- —
132°-134°F, ASTM, loose, c.l., refy lb. .0805- —
135°-137°F, ASTM, loose, c.l., ref'y lb. .0805- —

Prices for paraffin in bags and ctns., c.l., 7/10c. per lb. higher; 1,000 to 9,999 lbs., 2.7c. per lb. higher and under 1,000 lbs., 3.7c. per lb. higher.

Paraformaldehyde, 91%, powd., bgs., c.l., frt. alld lb. .15½- —
l.c.l., frt. alld lb. .17 - —
flake, bgs., c.l., frt. alld lb. .12 - —
l.c.l., frt. alld lb. .13½- —
USP X, fib. dms., c.l. lb. .198 - —
10,000-lb. lots lb. .196 - —
1,000-lb. lots lb. .198 - —
smaller lots lb. .208 - —
Paraldehyde, tech., 98%, 55-gal. dms., c.l., works lb. .1385- .1650
l.c.l., works lb. .1485- .1750
tanks, works lb. .1300- .1500
Paranitroanilin, dms., c.l., works, frt. alld lb. .50½- —
l.c.l., works, frt. alld lb. .53½- —
Paranitrochlorobenzene, kgs., works. lb. .26 - .27
Paranitrophenol, kgs., works, frt. equald lb. .50 - —
Paranitrotoluene, kgs., fib. dms., works lb. .33 - .36
Paraphenetidin, dms., works lb. 1.00 - —
Paraphenylenediamine, redistilled, dms., works lb. 2.00 - —
tech., refd., dms., same basis lb. 1.10 - 1.35
Paraphenylphenol, bgs., c.l., works. lb. .37½- —
l.c.l., same basis lb. .42 - —
Para-tertiary-amylphenol, ctns., c.l., works lb. .26½- —
l.c.l., works lb. .27½- —
tanks, works lb. .25½- —
Para-tertiary-butylphenol, bgs., c.l., works lb. .27½- —
l.c.l., same basis lb. .28½- —
Parathion, spray powder, 15%, dealers, tins, works lb. .45 - —
tech., dms., works lb. 1.50 - —
Paratoluenesulphonamide, flake, bbls., frt. alld lb. .64 - .66
powd., bbls., works lb. .70 - —
solid, bbls., frt. allo lb. .61 - —
Paratoluidin flake, bbls., frt. alld. lb. .64 - —
solid, bbls., frt. alld lb. .60 - .61
Paris green, dealer, distributor, dms., c.l., works, frt. alld, on 96 lbs. or over lb. .36 - .40
l.c.l., same basis lb. .37 - .53
Passion flower herb, bls lb. .21 - .23
Peanut meal, 45%, old proc., sacked, mills ton. 65.00 - —
solvent, same basis ton. 62.00 - —
Pectin, citrous, NF, powd., bbls lb. 2.05 - 2.06
tech., powd., bbls lb. 1.50 - —
Penicillin, crystalline, potassium, sterile, bulk, 1,000,000 units .08½- .09
Procaine, bulk, 1,000,000 units .08½- .09
Sodium, sterile, bulk, 1,000,000 units .08½- .09
Pentachlorophenol, dms., c.l., works, frt. equald lb. .21 - —
l.c.l., same basis lb. .24 - .29
truckload, 20,000 lbs. min. same basis lb. .21¼- —
Pentaerythritol, tech., bgs., c.l., works lb. .34 - —
l.c.l., works lb. .35 - .36
Di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).
Pentane, industrial, tanks, Tex. ref'y gal. .14½- —
Pepper, black, Malabar, spot, bgs lb. .93 - .94
red, Gondar, bgs lb. .32 - —
Japanese, hontakas, bgs lb. .49 - .50
birdseyes, bgs., afloat lb. .70 - .72
Mombasa, bgs., ship't lb. .55 - —
Nigerian, bgs lb. .33 - .35
Turkish, bgs lb. .31 - —
Zanzibar, bgs lb. .32 - —
white, bgs. lb. 1.14 - —
Peppermint leaves, USP, dom., bls., dms. lb. .65 - .70
imported, bls lb. 1.25 Nom.
Pepsin, NF 1:3,000, bulk lb. 3.75 - 3.90
Perchloroethylene, dms. c.l., or truckloads, works lb. .11½- —
dlvd., E. lb. .11½- —
l.c.l., dlvd., ex whse lb. .13½- —
dlvd. E lb. .13½- —
Peru balsam, dms. lb. 1.25 - 1.40
Petrolatum, amber, dms., c.l., refy. lb. .05 - .05¾
l.c.l., dlvd lb. .06¾- .07
tanks, refy lb. .03¼- .04⅛
cream, dms., c.l., refy lb. .06½- .07⅛
l.c.l., dlvd lb. .08½- .08¾
tanks, refy lb. .04⅜- .05⅛
extra, amber, dms., c.l., refy lb. .05¼- .05⅞
l.c.l., dlvd lb. .07 - .07⅛
tanks, refy lb. .03½- .04⅛
USP, white, lily, dms., c.l., ref'y lb. .06¾- .07½
l.c.l., dlvd lb. .08⅞- .09⅛
tanks, refy lb. .04⅞- .06
soft, dms., c.l., refy lb. .06¾- .07¾
l.c.l., dlvd lb. .08½- .08¾
tanks, refy lb. .05 - .05⅞
snow, dms., c.l., refy lb. .07⅛- .07¾
l.c.l., dlvd lb. .09⅜- .09⅝
tanks, refy lb. .05⅜- .05⅞
yellow, soft, dms., c.l., refy lb. .05¼- .05⅞
l.c.l., dlvd lb. .06⅞- .07⅛
tanks, refy lb. .03½- .05⅞
Petroleum, crude, bulk, at wells, California bbl. 1.42 - 3.53
Illinois bbl. 2.69 - 2.02
Kentucky bbl. 2.62 - 3.02
Louisiana-Arkansas bbl. 2.33 - 3.23
Montana bbl. 1.53 - 2.90
Oklahoma-Kansas bbl. 2.48 - 2.90
Penna., lower field bbl. 3.54 - —
Upper field bbl. 4.05 - —
Texas, East bbl. 2.90 - —
Gulf Coast lb. 2.63 - 3.22
North, North-Central bbl. 2.48 - 2.90
Panhandle bbl. 2.48 - 2.90
West bbl. 2.35 - 2.90
Wyoming bbl. 1.53 - 2.90
Fuel oil, bunker C, No. 6, East Coast, Baltimore, Md. bbl. 2.25 - —
Boston, Mass. bbl. 2.29 - —
Charleston, S. C. bbl. 2.20 - —
Jacksonville, Fla bbl. 2.18 - —
New York Harbor bbl. 2.25 - —
Norfolk, Va. bbl. 2.23 - —
Philadelphia, Pa. bbl. 2.25 - —
Portland, Me. bbl. 2.29 - —
Providence, R. I. bbl. 2.26 - —
Savannah, Ga. bbl. 2.20 - —
West Coast bbl. 1.80 - 2.10
Diesel, tanks, refy., California gal. .1025- .133
New York gal. .104 - —
Penna, western gal. .1075- .1125
Furnace, tanks, refinery, Arkansas, No. 2 gal. .085 - —
No. 3 gal. .08125- —
N. Y. Harbor No. 2 gal. .10 - —
group 3, No. 1 gal. .08625- .08875
No. 2 gal. .08 - .0825
No. 3 gal. .0775- .08
range gal. .08625- .09
Pennsylvania, western, No. 1 gal. .11 - .1143
No. 2 gal. .109 - .1135
No. 3 gal. .1075- .1135

With Esso Solvents you get dependable performance too!

BACKED BY continuing research at the Esso Laboratories and processed by closely controlled, modern refining methods . . . Esso Solvents offer high quality combined with uniformity and dependability.

YOU GET ALL 6 OF THESE IMPORTANT FEATURES WITH ESSO SOLVENTS

1. Multi-storage availability — water terminals in industrial centers.

2. Uniformity — made in modern refineries from carefully selected crude oil sources.

3. Economy—A storage facility near you for low freight cost and quick delivery.

4. Controlled evaporation — available in a wide range of evaporation rates with precise characteristics to meet your requirements.

5. Solvency — Esso aliphatics and Solvesso aromatics cover both high and low solvency ranges.

6. Modern handling methods — separate tank storage, pumping lines, tank cars and trucks, are used throughout in all Esso Solvent handling operations.

Esso Solvents: versatility and dependability with controlled high quality.

ESSO

PETROLEUM SOLVENTS

SOLD IN: Me., N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Pa., Del., Md., D. C., Va., W. Va., N. C., S. C., Tenn., Ark., La.

ESSO STANDARD OIL COMPANY
Boston, Mass. — New York, N. Y. — Elizabeth, N. J. Philadelphia, Pa. — Baltimore, Md. — Richmond, Va. Charleston, W.Va.—Charlotte, N. C.—Columbia, S. C. Memphis, Tenn.—New Orleans, La.

Petroleum, lacquer diluent, 150°-240°F, b.r., 43°-55°C, m.a.p. tanks, West Coast, ex tax, Los Angeles ..gal. .183 - —
East coast, N. J., N. Y. ..gal. .18 - —
Group 3, benzol-type ..gal. .14125- .14625
toluol-type ..gal. .13125- .13375
Mineral spirits, regular, tanks, California, ex tax, San Francisco ..gal. .174 - —
East coast, N. J., N. Y. ..gal. .17 - —
Group 3 ..gal. .11875- —
tankwagon, Boston ..gal. .19 - —
Buffalo ..gal. .195 - —
Chicago ..gal. .279 - —
Cleveland ..gal. .22 - —
Newark ..gal. .18 - —
New York ..gal. .18 - —
Philadelphia ..gal. .165 - —
Pittsburgh ..gal. .22 - —
Providence ..gal. .195 - —
specially refined, tanks, refy., Watson, Calif. ..gal. .244 - —
Borger, Tex ..gal. .24 - —
Houston, Tex ..gal. .24 - —
Wood River, Ill ..gal. .2625- —
tank transport, dlvd. N. J. ..gal. .32 - —
dlvd. N. Y. ..gal. .33½- —
tankwagon, N. J., N. Y., dlvd. ..gal. .37 - —
Naphtha, cleaners, tanks, East Coast, N. J. and N. Y. ..gal. .17 - —
Group 3 ..gal. .12875- —
tankwagon, Newark ..gal. .18 - —
New York ..gal. .18 - —
Philadelphia ..gal. .165 - .17
high solvency (see petroleum solvent, partial aromatic).
V.M.&P., 225°-300°F. b.r., tanks, West Coast, Los Angeles ..gal. .168 - —
Portland, Ore ..gal. .174 - —
San Francisco ..gal. .173 - —
Seattle, Wash ..gal. .174 - —
East coast, N. J., N. Y. ..gal. .18 - —
Group 3 ..gal. .12875- —
tankwagon, Boston ..gal. .205 - —
Chicago ..gal. .289 - —
Cleveland ..gal. .23 - —
Newark ..gal. .195 - —
New York ..gal. .195 - —
Philadelphia ..gal. .195 - —
Pittsburgh ..gal. .21 - —
Solvent, partial aromatic, tanks, East Coast, N. J., N. Y., 205°-292°F. b.r., 37°-38°C. m.a.p. ..gal. .26 - .27½
17°-29°C. m.a.p ..gal. .29 - .32½
266°-383°F. b.r., 35°C. m.a.p. ..gal. .29 - —
27°-28°C. m.a.p ..gal. .29 - .31
19°C. m.a.p ..gal. .34 - —
310°-392°F. b.r., 30°-38°C. m.a.p. ..gal. .27 - .32½
17°-19°C. m.a.p ..gal. .35 - .39
350°-425°F. b.r., 32°-34°C. m.a.p ..gal. .30½- .32½
25°C. m.a.p ..gal. .39½- —
18°-21°C. m.a.p ..gal. .35 - .43½
rubber, tanks, Cal., ex tax, San Francisco ..gal. .173 - —
East Coast, N. J., N. Y., ..gal. .18 - —
Group 3 ..gal. .12875- —
Stoddard, tanks, East Coast, N. J., N. Y. ..gal. .17 - —
Group 3 ..gal. .12375- —
Pennsylvania, western ..gal. .15 - —
tankwagon, Boston ..gal. .19 - —
..gal. .19 - —
Chicago ..gal. .289 - —
Cleveland ..gal. .22 - —
Los Angeles, ex tax ..gal. .173 - —
Newark ..gal. .18 - —
New York ..gal. .18 - —
Philadelphia ..gal. .165 - .17
Pittsburgh ..gal. .19 - —
Sulphonate, oil soluble, 60-62% sulphonic content, non-ret. dms., c.l., works ..lb. .16 - .18¼
l.c.l., works ..lb. .17 - .18½
tanks, works ..lb. .14 - .16½
50-55% sulphonic content, non-ret. dms., works ..lb. .15½- —
l.c.l., works ..lb. .16½- —
tanks, works ..lb. .12½- —
Phenobarbital, USP, dms., 100-lb. lots lb. 4.00 - —
Phenobarbital-sodium, USP, dms., 100-lb. lots lb. 4.00 - —
Phenol, 90-92% (cresol 8-10%), non-ret. dms. c.l., frt. alld. E. of Rockies lb. .17¾- —
l.c.l., same basis lb. .18½- —
ret. dms., c.l., same basis lb. .17 - —
l.c.l., same basis lb. .17½- —
tanks, same basis lb. .16 - —
82-84% (cresol 16-18%), non-ret., drums, c.l., same basis lb. .17¼- —
l.c.l., same basis lb. .18 - —
ret., dms., c.l., same basis lb. .16½- —
l.c.l., same basis lb. .17 - —
tanks, same basis lb. .15½- —
39° or above, tar distilled, non-ret. dms., c.l., same basis lb. .19¼- —
l.c.l., same basis lb. .20 - —
ret. dms., c.l., same basis lb. .19 - —
l.c.l., same basis lb. .19½- —
tanks, same basis lb. .17½- .18
USP, synthetic, dms., c.l., same basis lb. .19¾- —
l.c.l., same basis lb. .20½- —
tanks, same basis lb. .18 - —
Phenolphthalein, USP, or yellow bbls., dms., 2,000-lb. lots lb. 1.10 - —
smaller lots lb. 1.12 - 1.17
Phenothiazin, NF, fib. dms., c.l., frt. adjusted lb. .53 - —
over 2,100 lbs., same basis lb. .55 - —
less than 2,100 lbs. same basis. lb. .57 - —
Phenyl acetate, dms., 100-lb. lots, works lb. .50 - —
Salicylate (see Salol)
Phenylacetaldehyde solution, 50%, bots lb. 2.40 - 2.70
100%, bots lb. 4.00 - 4.65
Phenylacetamide 125-lb. dms., works. lb. 1.10 - —
smaller dms., works lb. 1.15 - 1.10
Phenylalanine, dextro-laevo, dms., works lb. 27.00 - 37.50
Phenylcarbethoxy pyrazolone, 250-lb. fib. dms., dlvd. E lb. 3.60 - —
smaller dms., dlvd. E lb. 4.00 - —
Phenyldiethanolamine, dms., c.l., dlvd E. lb. .40 - —
l.c.l., dlvd. E. lb. .41 - —
Phenylethanolamine, dms., c.l., works lb. .69½- —
l.c.l., same basis lb. .70 - —
Phenylethyl acetate, bots. lb. 1.35 - 1.95
Phenylethylphenyl acetate, bots lb. 3.95 - 4.40
Phenylhydrazin base, CP, bots lb. 3.00 - 3.07
Hydrochloride, commercial, kgs., works lb 1.75 - —
purified, bots., works lb. 5.17 - —
Phenylmethylpyrazolone (see Methylphenylpyrazolone).
Phloroglucinol, comi., fib. dms., works lb 6.40 - —
C.P., bots., fib. dms lb. 17.00 - 17.25
tech., fib., dms works lb. 10.45 - —
Phosgene, 150-lb cyls. works lb .37½- —
Phosphate defluorinated (see under D)
Phosphate rock, Curacao, Atlantic ports ton 45.00 - —
Florida, land pebble, run-of-mine, washed, dried unground, bulk, c.l., mines, 70-68%, b.p.l., c.l., same basis long-ton. 4.68½- —
72-70%, b.p.l., c.l., same basis long-ton. 5.68½- —
75%-74%, b.p.l., c.l., same basis long-ton. 6.68½- —
77%-78%, b.p.l., c.l. same basis long-ton. 7.68½- —
finely ground, 65%, b.p.l., basis 30% P_2O_5, minimum, bulk, c.l., mines. short-ton 5.60 - —
68%, b.p.l. basis 31%P_2O_5 minimum, mines. short ton. 5.80 - —
70%, b.p.l. basis 32% P_2O_5 minimum, mines. short-ton. 6.15½- —
plus or minus usual bonus adjustment clause for oil and labor. Prices on entirely pebble 50c. per long ton higher.
Phosphorus, red, amorphous cs.. lb. .46 - .47
dms. lb. .44 - .45
yellow, cns., works lb. .48 - .50
dms., c.l., works lb. .40 - —
l.c.l., works lb. .43 - —
Oxychloride, dms., c.l., works lb. .14 - —
l.c.l., dms., works lb. .17 - —
tankcars, works lb. .12½- —
Pentasulphide, solid, dms., c.l., works lb. .11½- —
l.c.l., dms., works lb. .13 - .13½
Pentoxide, dms., c.l., works lb. .13½- —
l.c.l., works lb. .16½- —
Sesquisulphide, tins, cs., works lb. .29 - —
export, dms. lb. .31 - .36
Trichloride, dms., c.l., works lb. .14 - —
l.c.l., works lb. .17 - —
tankcars, works lb. .12½- —
Phthalic anhydride, dms., c.l., works, frt. equald lb. .22 - —
l.c.l., same basis lb. .23 - —
tanks, same basis lb. .21½- —
Phthalimide, 97%-98%, dms. works, frt. alld. lb. .63 - .70
Phthalylsulphacetamide, fiber dms., lb. 5.00 - 5.50
Picoline (See Alpha, Beta and Gamma Picoline)
Pilocarpine hydrochloride, NF, bots. oz. 5.25 - —
Nitrate, USP, bots., vials oz. 5.10 - 5.20
Pimento, Guatamalan, bgs lb. .20 Nom.
Jamaican, bgs. lb. .29 - —
Mexican, bgs. lb. .23 - .25
Pinetar, retort, dms., incl. c.l., works gal. .44 - —
l.c.l., works gal. .50½- —
tanks, bulk, works gal. .35 - —
Pinkroot, bls lb. 3.00 - 3.25
Piperazine hexahydrate, French Codex dextro, bots kilo. 8.00 - 8.50
Piperidine, 98%, dms., frt. equald. lb 2.90 - 3.00
Piperonyl butoxide, dms., dlvd. E. lb. 4.50 - 5.30
Cyclonene dms dlvd E lb 4.20 4.50
Pitch, burgundy domestic, dms., inc. c.l., l.c.l. works 100 lbs. 9.80 - 10.25
Coaltar, 140°-150° F., m.p., dms., c.l., works ton. 41.20 - 42.09
Cottonseed, dms. works lb. .02¼ .03
Hardwood, paper bgs., c.l., works. lb. .02 —
Linseed, dms lb. .06 Nom.
Petroleum (see Asphalt, petroleum).
Pine, dms., incl., l.c.l., works, South 100 lbs. 8.25 - —
Soybean, dms., works lb. .05 Nom.
Tall, dms., works lb. .03¾- .04½
Plaster of Paris (see Gypsum).
Platinum metal, works oz. 93.00 - —
Pleurisy root, bls lb. .45 - .50
Podophyllum resin, NF, dms lb. 8.75 - —
Pokeroot, bls lb. .19 - .22
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works lb. .43 - —
10,000-20,000-lb lots, works. lb. .45 - —
smaller lots, works lb 48 50
Tristearate, dms., 20,000-lb. lots, works lb. .43 - —
10,000-20,000-lb. lots, works. smaller lots, works lb. .48 - .50
Polystyrene, colors, special, bgs., over 20,000 lbs. frt alld lb. .35½- .36
10,000-19,999-lb. lots, same basis lb. .36 - .36½
5,000-9,999-lb. lots, same basis, lb .36½ —
standard, bgs. lb. .35½- .36
crystals, heat-resistant, bgs., c.l. lb. .34 —
l.c.l. lb. .34½- —
standard, bgs., c.l. lb 32½ —
l.c.l. lb. .33 - —
Polystyrene in non-returnable fib. dms. ½c per lb. higher
Poppyseed, Argentine, bgs lb. .14½- —
Dutch, bgs. lb. .18 - —
Polish, bgs. lb. .17½- —
Turkish, bgs. lb. .14 - —
Potash, caustic, regular, flake, 88-92%, dms., c.l., works. 100 lbs. 9.15 - —
l.c.l., works 100 lbs. 10.20 - —
liquid, 45% basis, dms., c.l., works 100 lbs. 4.25 - —
l.c.l., same basis 100 lbs. 5.05 - —
tanks, same basis 100 lbs. 3.70 - —

A partial list of Oronite Products

Detergent Alkane	Purified Sulfonate
Detergent Slurry	Polybutenes
Detergent D-40	Naphthenic Acids
Detergent D-60	Phthalic Anhydride
Dispersant NI-O	Maleic Anhydride
Dispersant NI-W	Para-Xylene 95%
Wetting Agents	Ortho-Xylene
Cresylic Acids	Xylol
Gas Odorants	Aliphatic Acid
Lubricating Oil Additives	Hydroformer Catalyst
Sodium Sulfonates	Dispersant FO (Domestic Fuel Oil Inhibitor)

ORONITE will soon have Phenol available in tank car quantities and will be able to offer you advantages as a *real* source of supply.

Because Oronite is a producer of benzene, which continues to be scarce, we have control of the principal raw material. Too, the Oronite manufacturing process does not use either chlorine or sulfuric acid, also often in short supply.

With Oronite you will be assured of a dependable source of supply, good service and product when you need it.

You will find Oronite Phenol fully meeting the U.S.P. specifications and priced competitively. Contact any Oronite office for further information.

ORONITE CHEMICAL COMPANY

38 SANSOME ST., SAN FRANCISCO 4, CALIF. STANDARD OIL BLDG., LOS ANGELES 15, CALIF.
30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y. 600 S. MICHIGAN AVENUE, CHICAGO 5, ILL.
MERCANTILE SECURITIES BLDG., DALLAS 1, TEXAS

3967

Potash, Caustic, Regular, Solid—R Salt

Potash, caustic, regular, solid 88-92% dms., c.l. works 100 lbs. 8.70 - —
t.c.l., same basis, works, 100 lbs. 9.75 - —
Potassium abietate, dms., works lb .25 - .28
Acetate, NF, dms lb .21 - .26
Bicarbonate, USP, gran., dms lb. .22 - —
powd., dms lb .24 - —
Bichromate, bgs., c.l., works lb. .15 - —
t.c.l. same basis lb. .15½ .16¼
Potassium mchromate in drums ½c. higher
Bitartrate (see Cream of tartar).
Bromate, bbls., 1,000 lbs. or more, lb. .50 - .52
25-200-lb lots lb. .55 - .57
Bromide, USP, gran., bbls. kgs. lb. .54 - —
Carbonate, tech., calcined, bbls., c.l., works 100 lbs. 9.00 - —
t.c.l., same basis 100 lbs. 10.05 - —
hydrated, 83-85%, bbls., c.l., works 100 lbs. 7.60 - —
t.c.l., works 100 lbs. 8.65 - —
USP, gran., bbls., dms lb. .16½ .18
powd., bbls., dms lb. .21 - .23
Chlorate, cryst., dms., c.l., works, lb. .10¼ —
t.c.l., works lb. .11½ .12
powd., dms., c.l., works lb. .10¾ —
t.c.l., works lb. .12 .12½
export, dms., New York lb. .12¾ .13½
NF, gran., dms lb .32 .33
Chloride, USP, cryst., dms lb. .21 - .23
gran., dms lb 15 .17
powd., dms lb 24 .26
Chromate, tech., bgs lb. .50 - .50½
Citrate, USP, gran., dms lb. .41 - —
powder, dms lb. 40½ .41½
Potassium cyanide, dms., 500-lb. lots or more, works lb. .55 - —
smaller lots, works lb. .57 - —
Fluoborate, fib. dms., c.l., works lb. .30 - —
t.c.l., works lb. .31 - —
Fluoride, dms., works lb. .32 - —
Gluconate, dms lb. .75 - .79
Glycerophosphate, 75% solution, cbys lb. 2.15 - 2.25
Guaiacsulphonate, NF, dms lb. 2.10 - 2.30
Hydroxide, tech. (see Potash caustic).
USP, pellets 100-lb dms. 1 to 100-dm. lots lb. .28½ .33
Hypophosphite, NF, fib. dms., ton lots or less lb. 1.00 - 1.03
Iodine, dms. lb. 2.15 - —
Manure salt, 22% K_2O, bulk, mines unit-ton. .21 - —
Metabisulphate, gran., dms lb. .20 - .21
powd., dms lb .25 —
Muriate, dom. 50-60% K_2O, bulk, Carlshad, N M unit-ton. .43 - —
Frona, Cal. unit-ton .53 - —
50-51% K_2O, paper bgs., Carlsbad N M ton. 25.75 - —
Nitrate (see Saltpeter).
Oxalate, neutral, tech., fine gran., bbls., dms lb. .30 - .32
Pentaborate, gran., bgs., c.l., works ton. 184.00 - —
bbls., ton lots, ex whse ton. 261.00 - —
smaller lots, ex whse ton. 266.00 - —
ton. 266.00 - —
Powdered Potassium pentoborate, $10.25 per ton higher
Perchlorate, dms., c.l., works lb. .15 - —
t.c.l., works lb. .16½ - —
Potassium permanganate, tech., dms., works lb. .22½ - .23½
USP, dms., works lb. .24¾ - .30¼
Persulphate, dms., c.l., works lb. .18 - .19
t.c.l., works lb. .20 - .22
Phosphate, tetrabasic, bbls., works lb. .16½ - .18½
Prussiate, red, kgs lb. .60 - .62
yellow, dms., ton lots lb. .22½ - —
smaller lots lb. .23 - —
kegs lb. .28 - —
Silicate, glass, bgs., c.l., works, 100 lbs. 17.00 - —
t.c.l. 100 lbs. 17.80 - —
solution, clarified, 29° Be, 1:2.5, dms., c.l., works 100 lbs. 5.80 - —
t.c.l., 5 dms., or more, works 100 lbs. 6.55 - —
tanks, works 100 lbs. 5.45 - —
tech., 29° Be, 1:2.5, dms., c.l., works 100 lbs. 6.50 - —
t.c.l., 5 dms. or more, works 100 lbs. 7.00 - —
tanks, works 100 lbs. 7.00 - —
40.5° Be., 1:2.0, dms., c.l., works 100 lbs. 6.45 - —
t.c.l., 5 dms. or more, works 100 lbs. 7.20 - 7.30
tanks, works 100 lbs. 6.10 - 6.15
Silicofluoride, bbls., works lb. .09 - .10
Stannate, dms., frt. alld., E lb. .635 - .701
Sulphate, agricultural, 49-51%, K_2O, bulk, works ton. 37.25 - —
NF VII cryst. dms lb. .31 - .33
gran., dms. lb. .18½ - —
powder dms. lb. .16½ - .17
Sulphocyanide, NF, cryst. (see Potassium thiocyanate)
Thiocyanate, NF, cryst. dms lb. .85 - .94
tech., works lb. .77 - .79
Titanate, ctns., c.l., works lb. .14 - —
5-ton lots, works lb. .14½ - —
1-ton lot or less, works lb. .14¾ - —
Potassium-magnesium sulphate bulk, works basis 40% K_2SO_4, 18% MgO ton. 16.00 - —
Potassium-sodium tartrate (see Rochelle salt).
Potassium-titanium fluoride, fib. dms., works lb. .39 - .40
Oxalate, bbls., dms lb. .85 - .95
Potassium-zirconium fluoride, fib. dms., c.l., works lb. .50 - —
t.c.l., works lb. .52½ - .55
Progesterone, USP, bots., 100-gr. lots, gm. .79 - —
Acetate, bots. gm. .70 - —
Procaine hydrochloride, USP, dms., frt. alld lb. 3.10 - 3.40
Propane, commercial grade tanks, group 3 gal. .04 - —
Propyl acetate, normal, dms. c.l., dlvd. lb. .12¾ —
t.c.l., dlvd. lb. .13¾ —
tanks, dlvd lb. .10½ —
Aldehyde (see Propionaldehyde).
Gallate, dms., 100 to 2,000-lb. lots, works lb. 3.90 - 4.40
Parahydroxybenzoate, USP, dms lb. 3.30 - 3.40
Propylene dichloride, dms., c.l., dlvd. E lb. .0845 - .095
t.c.l., same basis lb. .0950 - .1050
tanks same basis lb. .07 - .08
Oxide, dms., c.l., dlvd. E lb. .19½ - .20½
t.c.l. dlvd E lb. .20½ - .21½
tanks, dlvd. E lb. .17½ - .18½
Propyleneglycol, industrial, dms., c.l., dlvd. E lb. .19¼ - .21¼
t.c.l., same basis lb. .20¼ - .22¼
tanks, same basis lb. .17½ - .18½
USP, dms., c.l., dlvd. E lb. .20¼ - .21½
t.c.l. same basis lb. .21¼ - .22¼
tanks, same basis lb. .18½ - .19½
Methylether, dms., c.l., dlvd. E lb. .20 - —
t.c.l. same basis lb. .21 - —
tanks, same basis lb. .18½ - —
Propylthiouracil, bots., 50-kilo lots or more kilo. 55.00 - —
smaller lots kilo. 55.10 - 55.30
Psyllium seed, black, bgs lb. .26 - .27
blonde, bgs lb. .16 - .17
husks, bgs lb. .42 - .44
Pumice, dom., grd., coarse to fine, 0, ½, 1, 1½, 2, 3, bgs., ton lots lb. .02¾ - .04¼
smaller lots lb. .03⅜ - .04½
imported, Italian, silk-screen, coarse, bags, ton lots lb. .06½ - —
fine, bgs., ton lots lb. .04 - —
sun dried, coarse, bgs ton lots lb. .02½ - .04
fine, bgs., ton lots lb. .02½ - .04
Pumice in bbls is ½c. per lb higher
Pumpkin seed, bgs lb. .25 - .26
Pyrethrin, synthetic (see Allethrin).
Pyrethrum flowers, fine grd. 0.9% pyrethrins bbls works, lb. .50 - —
powder, 1.3% pyrethrins, bbls., works lb. .71½ - —
liquid (20 to 1) basis 2 grams pyrethrins per 100cc, odorless base, 50 dms., works, gal. 9.20 - —
one to 4 dms., works gal. 9.40 - —
(30 to 1) basis 3 grams pyrethrins per 100 cc odorless base, bbls. works gal. 15.75 - —
oleoresin, dewaxed, 20%, for areosol bombs, dms., works lb. 11.00 - 12.00
Pyridin, denaturing, dms., c.l., works and frt. equald gal. 2.77 - —
t.c.l., same basis gal. 2.80 - —
refd., 2°, non-ret. dms., t.c.l., same basis lb. 1.15 - —
Pyridoxine hydrochloride, bots., 100-gm. lots gm. .55 - —
Pyrites, Canadian, works long-ton. 3.00 - 3.00
Pyrocatechol (see Catechol)
Pyrogallol, NF lb. 3.25 3.43
Pyrophyllite, insecticide grade 200 mesh bgs c.l. mines ton 13.00 - 13.50
No. 3, 200 mesh, bulk, c.l. mines ton. 11.00 - —
rubber grade 140 mesh bgs. c.l. mines ton. 11.50 - 12.00
standard, 200 mesh, bulk, c.l., mines ton. 12.50 - —
230 mesh, bulk, c.l., mines ton. 13.50 - —
325 mesh, bulk, c.l., mines ton. 16.75 - —
Standard and No. 3 pyrophyllite in paper bgs. $3 to $3.50 per ton extra.
Pyroxylin scrap, opaque, amber, dms., works lb. .15 - —
black, dms., works lb. .12 - —
mixed, mottled, dms., works, lb. .11 - —
white, china, ivory, dms., works lb. .12 - .15
dense, dms., works lb. .12 - .15
translucent pastels, cs., works lb. .14 - —
transparent, colorless, dms., works lb. .25 - —
colors, dms., works lb. .14 - —
shavings, opaque, amber, cs., works lb. .11 - —
mixed colors, dms., works, lb. .11 - —

Q

Quassia chips lb. .17 - —
Quebracho extract, clarified, grd., 70% tannin, bgs., c.l., lb. .16½ - .16¾
liquid, 35% tannin bbls., works, tanks, same basis lb. .08¼ - —
solid, clari., 64% tannin, bgs., c.l., exdock, duty extra lb. .12⅞ - —
ordinary, 63% tannin, bgs., c.l. same basis lb. .11 31-64 —
Quebracho extract prices are based on $20.40 freight and $1 insurance per long ton.
Quercitron extract, crystals, No 1, bbls., t.c.l. lb. .40 - —
liquid, No. 1, bbls. t.c.l lb. .19 - —
Quicksilver, flasks (76 lbs. net) flask. 183.00 - 185.00
Quinceseed, bgs. lb. 1.50 Nom.
Quinidine, NF, V cryst., cns., 100-oz. lots oz. 1.15 - —
powd., precip., cns., 100-oz. lots oz. 1.17 - —
Sulphate, USP, cns., 100-oz. lots oz. .87 - —
Quinine, NF, cns., 100-oz. lots oz. .54 - —
Bisulphate, USP, cns., 100-oz. lots oz. .37½ - —
Dihydrochloride, USP cns oz. .54 - —
Ethylcarbonate, NF, cns., 100-oz. lots oz. .63½ - —
Hydrobromide, NF cns. 50-oz. cns. oz. .47½ - —
Hydrochloride, USP, cns., 100-oz. lots oz. .47½ - —
Phosphate, NF, cns., 100-oz. lots oz. .61 - —
Salicylate, NF, cns., 100-oz. lots oz. .55 - —
Sulphate, USP cns., 100-oz. lots oz. .42 - —
Quinine and Urea hydrochloride, NF cans oz. .56 - —
Quinolin, dms., c.l., frt. equald lb. .50¾ - —
t.c.l., same basis lb. .51¼ - —
tanks, same basis lb. .50 - —

R

R salt, paste, 100% basis, dms., frt. alld lb. .83 - —
powd., basis 100%, frt. alld lb. .88 - .93

Red, BON acid maroons, pure, bbls. lb. 1.75 - —
resinated, bbls. lb. 1.50 - —
arylid, deep shades, bbls. lb. 3.60 - —
light shades, bbls. lb. 2.75 - —
maroon, bbls. lb. 3.60 - 5.90
Cadmium, CP, dark shade, bbls., frt. alld. E. of Rockies lb. 4.30 - —
light shade, same basis lb. 4.00 - —
medium shade, bbls., same basis lb. 4.25 - —
medium-light shade, bbls., same basis lb. 4.05 - —
orange shade, bbls., same basis lb. NP - —
lithopone, deep shade, bbls., same basis lb. 1.93 - —
light shade, bbls., same basis, lb. 1.70 - —
maroon shade, bbls., same basis lb. 2.05 - —
medium shade, bbls., same basis lb. 1.83 - —
medium-light shade, bbls., same basis lb. 1.77 - —
orange-red shade, bbls., same basis lb. 1.64 - —

Red cadmium lithopone, all shades, in smaller pkgs., 5c. per lb. higher; all prices are 1c per lb higher ex whse. Los Angeles and San Francisco.

Carmine No 40 (see Carmine).
Dyes (see Dyes coaltar).
Eosin toner, bbls., works lb. 1.60 - —
Indian, dom., pure, bgs., Bethlehem, Easton, E. St. Louis, N. Y lb. .12¾- —
Iron oxide, pure, 98% ferric oxide, bgs., c.l., works lb. .12¾- —
t.c.l., works lb. .13 - —
natural, 75%-85% ferric oxide, bgs., t.c.l., Bethlehem, Pa.; Copley, O.; Easton, Pa.; E. St. Louis lb. .08 - —
Lake C, toner, alizarin, bbls., works lb. 1.10 - 1.20
Lithol, toner, bbls., works lb. .79 - —
rubine toner, pure, bbls., works lb. 1.50 - —
resinated, bbls., works lb. 1.40 - —
Virginia-type bbls., works lb. 1.40 - —
Maroon toner, MNPT, kgs., works, lb. 3.60 - —
10,000-lb. lots, works lb. 4.22 - —
smaller lots, works lb. 4.24 - —
Metallic bbls., c.l., works lb. .02½- —
t.c.l works lb. .02¾- —
Oxide (see Red iron oxide).
Persian gulf bgs., c.l., works lb. .06¾- —
t.c.l. works lb. .07 - —
Para toner, bbls lb. .95 - —
Chlorinated kgs lb 1.10 - 1.15
Phloxin toner (see Red eosin toner).
Rhodamine, molybdated, PMA, kegs lb. 5.35 - —
tungstated, PTMA, works, kegs, lb. 6.35 - —
Spanish, oxide, bbls., c.l., ex dock lb. .05¾- —
t.c.l., ex dock lb. .06 - —
ex whse., New York lb. .06½- —
Toluidin toner, deep shades, kgs., works lb. 1.50 - —
light shades, kgs., works lb. 1.50 - —
Turkey, bbls., works lb. .60 - —
Tuscan, bbls., frt. equald lb. .24½- .25
Venetian, 15%, bgs., works lb. .0350- .037
20%, bgs., works lb. .0475- —
25%, bgs., works lb. .0525- —
30%, bgs., works lb. .0550- —
35%, bgs., works lb. .0575- —
40%, bgs., works lb. .0625- —
Vermilion Amer. bbls lb .32 - —
Quicksilver, ctns. lb 3.52 - —
Watchung-type, bbls. lb. 1.95 - —
Red KB base (see Chloro (4)-2-amino-toluene).
Red precipitate, NF, powd., fib. dms lb. 4.37 - 4.41
Red saunders, NF, powd., bbls lb. .35 - .40
Rennin, NF, powder lb. 6.25 - —
Resorcinol, tech grade, dms., c.l., works lb. .77½- —
t.c.l., works lb. .78½- —
USP, cryst., dms., works lb. 2.75 - —
powd., dms., works lb. 2.95 - —
Monoacetate, NF, dms lb 3.25 - 3.45
Rhatany root, bgs lb. .15 - .16
Rhodinol, 5-lb. cans lb.25.00 -56.00
Rhubarb root, China, whole, cs lb. .65 - .85
powd., bbls. lb. .75 - .90
India, whole, bgs lb. .30 - .35
powdered, bbls. lb. .38 - .40
Riboflavin USP bots., dlvd kilo.100.00 - —
readily soluble, bots., dlvd kilo.100.00 - —
Rice bran, concentrate, dms, Cedartown, Ga lb. .79 - —
Rochelle salt, USP, gran., powd., dms., c.l. lb. .32½- —
5,000-lb. lots, dms., c.l. lb. .32½- —
smaller lots lb. .33½- .38½
Rosin, gum and wood (see Naval Stores, Protective Coatings market).
Rotenone, CP bbls., works lb.20.00 - —
tech., bbls., works lb.16.50 - —
Rottenstone (see Tripoli)
Rutin, NF, fib. dms., 25-kilo lots, kilo.25.00 - —
10 to 25-kilo lots, fib. dms. kilo.25.00 -30.00
1 to 10-kilo lots fib dms kilo 30.00 - —
Ryania, bgs., 100% powd., works lb. .20 - —

S

Sabadilla seed, powd., bbls. lb. .49 - .49½
activated, ground with lime, bbls lb. .35 - .38
Saccharin, USP gran., soluble, dms., 1000-lb lots lb. 1.60 - —
smaller lots lb. 1.70 - 1.80
powd., soluble, insoluble, dms., 1000-lb. lots lb. 1.65 - —
smaller lots lb. 1.75 - 1.95
Safrol, dms lb. .72 - 1.20
Sage, Cretan, bgs. lb. .11 - —
Dalmatian, bgs. lb. .45 - —
Italian, bgs. lb. .16 - .17
Sodium benzoate, tech., bbls., dms.,
Sago flour, raw, bgs lb. .07¼- .07¼
refined, bgs lb. .08¾- .09¼
Sal soda (see Soda sal)
Powdered salol, 25c. higher.
Salol NF gran. bbls., kgs. lb. 1.10 - —
Salt, rock, paper bgs., c.l. 100 lbs. .98 - —
Table, vacuum, common, fine, paper bgs., c.l 100 lbs. 1.12 - —
Saltcake, dom., bulk works, 100% Na_2SO_4 basis ton.19.00 - —
Saltpeter, cryst. bbls., 10-ton lots, 100 lbs 14.40 - —
smaller lots 100 lbs 14.65 -14.90
powd., bbls. 20-ton lots 100 lbs 10.75 - —
smaller lots 100 lbs.12.00 -12.50
gran., bbls., 20-ton lots, 100 lbs. 9.75 - —
smaller lots 100 lbs 11.10 -11.50
NF, gran., dms lb. .09¾- .11¼
Saltpeter in bags, 50c. per 100 lbs. less; in kegs $1 more.
Sandalwood chips, East Indies, bgs., lb. .65 - .66
powd., dms lb 75 76
Sanguinarine nitrate, bots. oz. 4.75 5.50

Santonin, NF, dom. cryst., powd., dms., cns lb.76.50 -80.00
imported, cryst., powd., cns lb.76.50 -80.00
Saponin, No. 1, 100-lb. dms. lb. 2.75 - —
Sarsaparilla root, dom., bls. lb. .45 - .50
Honduras, bls. lb. .38 - .40
Mexican, bls. lb. .28 - .29
Sasassafras root bark, ord., bls. lb. .45 - —
select, bls. lb. .60 - —
Schaeffer's salt, paste dms., frt. alld., basis 100% lb. .85 - .95
powder, bgs., frt. alld. lb. .95 - —
Scopolamine hydrobromide, USP, bots oz.13.00 -14.50
Seidlitz mixture, bbls., 5,000-lb. lots lb. .30½- —
smaller lots lb. 31 .32
Selenium, powd., dms., dlvd lb. 4.25 - 4.75
Senega root, bls lb. 2.30 - 2.40
Serpentaria root, bls lb. 4.85 - 5.00
Sesame seed, Nicaragua, hulled, bgs. lb. .24 - —
natural, bgs. lb. .15½ Nom.
Salvadorian lb. .14 - .14½
Shellac, bleached, bonedry, bgs., 1,500-lb. lots lb. .47 - —
bbls., 1,500-lb. lots lb. .48 - —
kgs., 1,500-lb. lots lb. .50 - —
refined, bgs., 1,500-lb. lots lb .57 - —
bbls., 1,500-lb. lots lb. .58 - —
kgs., 1,500-lb. lots lb. .60 - —

Bonedry shellac prices for less than 1,500-lb. lots, 1c. per lb higher for all packages.

lemon, No. 1, bgs., 10-bg. lots lb. .39 - —
No. 2, bgs., 10-bg. lots lb. .37 - .39
Superfine, bgs., 10-bg. lots lb. .34 - .36
TN, bgs., 10-bg. lots lb. .32 - —

Shellac in 1 to 9 bg. lots, 1c. more.

Shingle stain oil (see Oil, shingle stain).

Silica, amorph., dry-grd., 325 mesh, bgs., c.l., works ton.25.00 - —
t.c.l., works ton.30.00 -40.00
hard-quartz, 99½, 325 mesh, bgs., c.l., works ton.20.00 - —
t.c.l., works ton.25.00 -30.00
140 mesh, bgs., c.l., works ton.15.00 - —
t.c.l., works ton.20.00 - —
Silicon tetrachloride, tech., dms., c.l., works lb. .16 - —
t.c.l., works lb. .20 - .28½
Silver bullion, ingots, cs lb. .85¼- —
Cyanide, 6b. dms., 2,500-oz. lots oz. .77½- —
1,000-oz. lots oz. .77½- —
500-oz. lots oz. .77½- —
100-oz. lots oz. .78½- —
Nitrate, CP, crystals, bots., 2,500-oz. lots oz. .54¾- —
1,000-oz. lots oz. .56 - —
500-oz. lots oz. .56½- —
250-oz. lots oz. .57 - —
USP granular silver nitrate, 4c. per oz. higher.
Proteinate, mild USP, bots., dms., 1,000-oz. lots oz. 1.05 - —
strong, NF, bots., dms., 1,000-oz. lots oz. 1.00 - —
Skullcap herb, Eastern, bls. lb. .50 - .65
Western, bls lb. .30 - .35
Slate flour, bgs., c.l., works ton 9.55 -13.00
t.c.l., ex whse ton.21.00 -27.35
Smalt, black, ctns lb. .15 - —
Blue, ctns lb. .18 - —
Soapbark, bls. lb. .24 - .25
crushed, bls., bbls lb. .30 - .31
powd., bbls. lb. .33 - .34

Soda ash, dense, 58% paper bgs., c.l., works 100 lbs. 1.75 - —
t.c.l., stock points 100 lbs. 2.85 - 4.62
bbls., c.l., works 100 lbs. 2.30 - —
t.c.l., stock points 100 lbs. 3.35 - 4.12
bulk, c.l., works 100 lbs. 1.45 - —
light, 58%, paper bgs., c.l., works 100 lbs. 1.65 - —
t.c.l. stock points 100 lbs. 2.75 - 4.52
bbls., c.l., works 100 lbs. 2.20 - —
t.c.l. stock points 100 lbs. 3.25 - 5.02
bulk, c.l., works 100 lbs. 1.35 - —
Soda, caustic, flake, powd., 76%, dms., c.l., works, frt. equald. 100 lbs. 4.10 - —
t.c.l., stock points 100 lbs. 5.30 - —
liquid, 50%, sellers' tanks, works, dry basis 100 lbs. 2.55 - —
rayon-type tanks works, dry basis 100 lbs. 2.65 - —
70% sellers' tanks, works, dry basis 100 lbs. 2.65 - —
rayon type, tanks, works, dry basis 100 lbs. 2.75 - —
solid, 76%, dms., c.l., works 100 lbs. 3.70 - —
t.c.l., stock points 100 lbs. 4.90 - —
Sal. bgs., c.l., works 100 lbs. 1.40 - —
t.c.l. works 100 lbs. 1.70 - —
Soda-lime, USP, dms lb. .23 - .25
Sodium acetate, anhyd., bgs., c.l., works lb. .12 - —
t.c.l., dms lb. .12¾- —
NF, gran., dms., works lb. .10 - .16½
Alginate, refined, bbls., works lb. .83 - —
NF, white, powd., dms., ton lots, works lb. .87 - 1.30
Antimoniate, bbls., c.l., dlvd. E lb. .27½- —
t.c.l., dlvd. E lb. .29 - —

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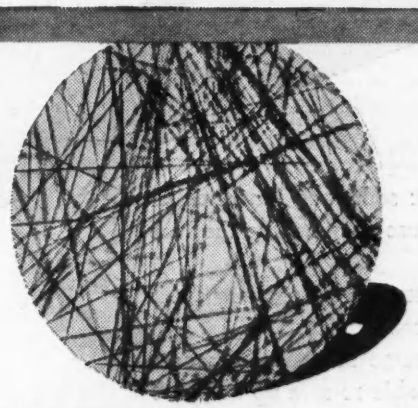

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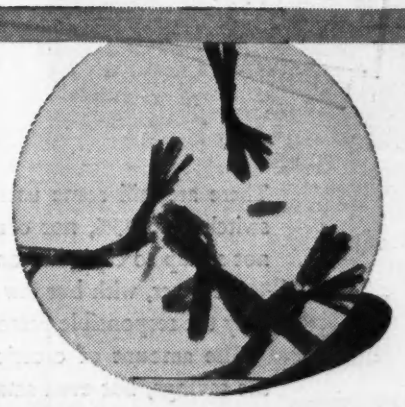

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AMMONIA • NITROPARAFFINS • SOLVENTS • PLASTICIZERS • INTERMEDIATES

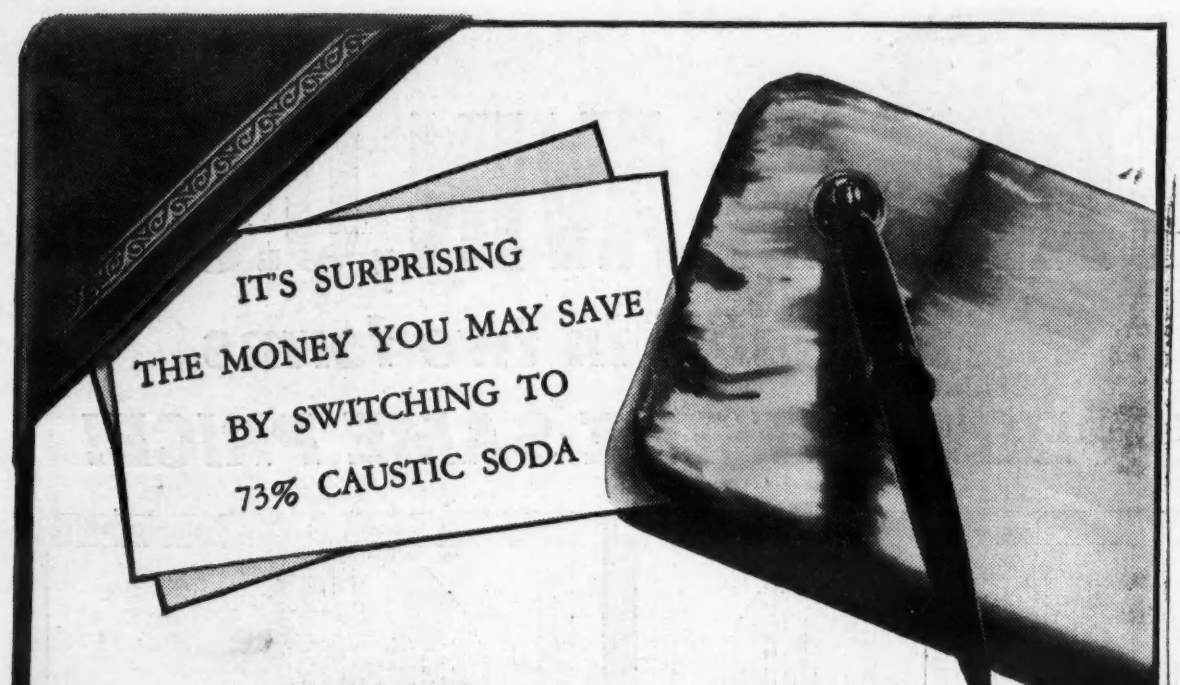
Sodium Arsenate—Sodium Sulphate

Sodium arsenate, dms., c.l., works. lb. .12½- —
t.c.l. dms., works lb. .13¾- .14¾
Arsenite, dms., c.l., works lb. .13½- —
t.c.l. dms works lb. .14¼- .15¼
solution, dms., wurks gal. .70 - 1.10
Ascorbate, dms., 25-50 kilo lots kilo.21.00 - —
10-kilo lots kilo.21.35 - —
5-kilo lots kilo.21.75 - —
1-kilo lots kilo.22.00 - —
500-gram lots, bots kilo.22.50 - —
Benzoate, tech., bbls., dms., 100-lb. lots or more lb. .39 - —
USP, bbls., dms. 100-lb. lots. or more lb. .46 - —
Bicarbonate, USP gran., bgs., c.l., works 100 lbs. 2.70 - —
t.c.l., works 100 lbs. 3.70 - —
powd., bgs., c.l., works 100 lbs. 2.30 - —
t.c.l., works 100 lbs. 3.30 - —
Bichromate, bgs., c.l., works. lb. .11½- —
t.c.l., same basis lb. .12 - .13¼
Bifluoride bbls., c.l., works, frt. equald lb. .1375- —
t.c.l., same basis lb. .1415- —
Bisulphate, bulk, c.l., works 100 lbs. 2.00 - —
dms., c.l., works 100 lbs. 2.65 3.85
t.c.l., works 100 lbs. 3.05 3.65
Bisulphite anhyd., bgs.,c.l., works. 100 lbs. 4.50 - —
t.c.l., works lb. 4.90 - —
solut. 35° bbls., c.l., works 100 lbs 1.40 - —
t.c.l., works 100 lbs. 1.80 - —
Borate (see Borax).
Bromide, USP, bbls., kgs., works. lb. .34 - .35
Cacodylate, NF, dms., jrs. lb. 8.52 - —

Sodium carbonate, anhydrous (see Soda ash), crystalline, decahydrated (see Soda sal), monohydrated, bgs., c.l., works. 100 lbs. 2.90 - —
t.c.l., works 100lbs. 3.30 - —
Carboxymethyl cellulose (see CMC).
Chlorate, cryst., dms., c.l., works. lb. .08¾- —
t.c.l., works lb. .10¼- .11
Chloride, tech. (see Salt).
USP, dms. lb. .05 - .12
Chlorite, tech., dms., works lb. .58 - .73
Chloroacetate, tech., dms., c.l., works lb. .24 - —
t.c.l., works lb. .25 - .26
Chromate, dms., c.l., works lb. .13¼- —
t.c.l.,, same basis lb. .13¾- .15
Citrate, anhyd., dms lb. .60 - .65
USP VIII, gran. dms. lb. .26 - .30½
USP XIV gran., dms. lb. .29½- .34
Sodium citrate USP powd. prices ½c. higher.
Cyanate, dms., 1,000-lb. lots, works lb. .85 - 1.10
smaller lots, works lb. 1.00 - 1.25
Cyanide, flake, 96-98%, dms., c.l. or 20,000-lb. lots lb. .178 - —
over 1,000-lb. lots lb. .188 - —
100-lb. to 1,000-lb. lots lb. .198 - —
Granular sodium cyanide 1c. higher.
Diacetate, 33-35% acidity, 250-lb. dms., works lb. .14 - —
t.c.l. lb. .14¾- —
anhydrous, dms., c.l., works lb. .17 - —
t.c.l. lb. .17¾- —
Fluoride, white, 97%, bbls., c.l., works lb. .1250- —
t.c.l., works lb. .1290- —

Sodium fluoracetate, monobasic, 8-oz. tins, 50 to a case, works lb.12.00 - —
2 to 25 tins to case works lb.12.00 -16.50
1 oz. tins, 16 to 64 to case, works lb.16.50 -21.00
Formate, bgs., c.l., dlvd. E.... 100 lbs. 7.60 - —
t.c.l., works 100 lbs. 8.65 - —
Gentisate, 100-lb. fib. dms. lb. 8.50 - —
Gluconate, technical, bgs. lb. .35 - —
refined, dms. lb. .80 - .83
Glutamate, monobasic, dms., c.l. lb. 1.70 - —
Glycerophosphate, NF, cryst., bbls. lb. 2.10 - 2.25
powder, bbls. lb. 2.15 - 2.30
solution, 75%, cbys. lb. 1.45 - 1.60
Hydride, dms., works lb. 2.00 - 3.00
Hydrosulphide (see Sodium sulphydrate).
Hydrosulphite, dms., c.l., frt. alld lb. .24½- —
t.c.l., frt. alld. lb. .25 - —
Hydroxide, tech. (see Soda caustic).
NF, pellets, 100-lb dms., 1 to 100-dm. lots lb. .18½- .23
Hypophosphite, NF, dms., ton-lots, or less lb. .95 - .98
Hyposulphite, photo grade, bgs., c.l., works 100 lbs. 4.50 - 4.75
t.c.l., same basis 100 lbs. 5.00 - 5.05
pea crystals, bgs. 100 lbs. 4.50 - —
gran., bgs., c.l., works 100 lbs. 4.75 - 5.00
tech., bgs., c.l., works 100 lbs. 4.50 - —
t.c.l., works 100 lbs. 4.90 - 6.90
Sodium hyposulphite crystals in bbls. 50c. higher.
NF (see Sodium thiosulphate).
Iodide, USP, bots., dms. lb. 2.80 - 2.92

Sodium lactate, edible, 50%, dms., cbys., works lb. .21½- —
60% dms., cbys., works lb. .26½- —
tech., 50%, dms., cbys., works, lb. .16¼- —
Laurysulphate, dms., c.l., dlvd. lb. .24 - —
t.c.l., dlvd. lb. .25 - —
tanks, dlvd. lb. .23 - —
Metabisulphite (see sodium bisulphite).
Metaborate, octahydrate, gran., bgs., c.l., works ton.78.50 - —
t.c.l., ex whse ton.124.50 -129.50
Sodium metaborate, octahydrate in bbls., $24.50 per ton higher.
tetrahydrate, c.l., bbls., works, ton.199.50 - —
Metallic, bricks, bbls., works lb. .17 - .19
tanks, works lb. .16 - —
Metanilate, bbls., frt. alld lb. .62 - —
Metasilicate, anhyd., ogs., c.l., works 100 lbs. 4.85 - 5.00
t.c.l., works 100 lbs. 5.10 - 5.50
dms., c.l. 100 lbs. 5.25 - 5.30
t.c.l. 100 lbs. 5.50 - 5.75
Molybdate, crystals, bbls., works lb. .75 - .85
powd., anhy., dms., works lb. .85 - .92
Monohydrate (see Sodium carbonate, monohydrated).
Naphthionate, bbls lb. .70 - —
Nitrate, crude, dom., bgs., c.l., works ton.47.00 - —
bulk, c.l., works ton.43.50 - —
imp., 100-lb. bgs., c.l., Atl. Gulf, Pac., whse ton.53.00 - —
bulk, c.l., same basis ton.49.50 - —
Nitrite, USP bbls., c.l., works, frt. equald lb. .0775- —
t.c.l., same basis lb. .0925- .18
Orthosilicate, anhyd., dms., c.l., works 100 lbs. 5.85 - —
t.c.l., works 100 lbs. 7.60 - —
hydrated, flake, bbls., c.l., works 100 lbs. 4.75 - —
t.c.l., works 100 lbs. 5.50 - —
Oxalate, 58%, bgs., works lb.10.85 - —
Para-aminobenzoate, dms., 1,000-lb. lots or more lb. 2.40 - —
smaller lots lb. 2.45 - 2.50
Para-aminosalicylate, dms., 1,000-lb. lots, frt. adjusted lb. 3.75 - —
smaller lots, same basis lb. 3.80 - 4.25
Pentachlorophenate, briquets, bgs., c.l., works, frt. equald. lb. .25½- —
t.c.l., same basis lb. .26½- .28½
Pentachlorophenate, pellets, bgs., c.l., same basis lb. .25 - —
t.c.l., same basis lb. .26 - .28
powdered, bgs., c.l., same basis. lb. .24 - —
t.c.l., same basis lb. .25 - .27
Pentachloropnenate 20,000 lbs. min. truckloads ¼c. per lb. over carlot prices.
Pentahydrate, bgs., c.l., works. 100 lbs. 4.00 - —
t.c.l., bgs., works 100 lbs. 4.35 - 4.55
dms., c.l., works 100 lbs. 4.80 - —
t.c.l., works 100 lbs. 5.15 - 5.65
Perborate, USP, tech., bbls., c.l., works lb. .193 - —
t.c.l., works lb. .198 - —
Peroxide, dms., c.l., dlvd. E. of Miss. lb. .1860- —
t.c.l., same basis lb. .1910- .2010
Phenolsulphonate, USP IX, gran., dms lb. .44 - .45
powd., dms lb. .47 - .48
Phosphate, dibasic, anhyd., bgs., c.l., frt., equald 100 lbs. 7.45 - —
t.c.l., works 100 lbs. 7.85 - —
USP, dried powd., bgs., dms., works lb. .19 - .20½
duohydrate, bgs., c.l., frt. equald 100 lbs. 7.05 - —
t.c.l., frt. equald 100 lbs. 7.25 - —
monobasic, anhyd., bgs., c.l., frt. equald 100 lbs. 8.45 - —
t.c.l., frt. equald 100 lbs. 8.90 - —
tribasic, cryst., bgs., c.l., frt. equald 100 lbs. 4.20 - —
t.c.l., frt. equald 100 lbs. 4.60 - —
Sodium phosphates in dms., 60c. higher than bgs.
Prussiate, yellow, bgs., 10-ton lots lb. .13½- —
smaller lots lb. .14 - —
Pyrophosphate, acid, bgs., c.l., works, frt. equald 100 lbs.10.75 - —
ferric, dms., 1,500-lb. lots, works lb. .31 - —
smaller lots, works lb. .32 - —
tetrasasic, anhy., bgs., c.l., works, frt. equald 100 lbs. 7.90 - —
t.c.l., frt. equald 100 lbs. 8.10 - —
Salicylate, USP, dms. lb. .68 - —
Sesquicarbonate, bgs., c.l., works. 100 lbs. 2.10 - —
t.c.l., dlvd., zone 1 100 lbs. 3.85 - 4.10
zone 2 100 lbs. 4.10 - 4.35
zone 3 100 lbs. 4.40 - 4.65
zone 4 100 lbs. 5.10 - 5.35
Sales zones are: (1) All States E. of Miss. R. and N. of south bound of Ky. and Va.; Ala., La., and Miss. south of 31° Tex. E. of 100°; S. of 31° Fla.; also Me. N. H., and Vt., in which there are special county zones; Davenport, Ia. and St Louis; (2) Ark. E of 98° Ga.; Iowa (except Davenport) Minn., Mo (except St Louis), Neb., E. of 98° N. C., S. C., Tenn and Tex. N. of 31° and E. of 100° (except Wichita Falls); also Ala. La. and Miss No of 31°; (3) Ark. W of 98° Kan. Neb W of 98°; N. D. Okla., S. D., Tex. W of 100° (including Wichita Falls excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah Wyo. and El Paso Tex.
Sesquisilicate, hydrated, dms., c.l., works 100 lbs. 5.50 - —
t.c.l., works 100 lbs. 7.00 - —
hydrated, bgs., c.l., works 100 lbs. 4.70 - —
t.c.l., bgs., works 100 lbs. 5.25 - 6.00
Silicate, liquid, 40° 1:3.2, turbid, dms., c.l., works 100 lbs. 1.35 - —
t.c.l., works 100 lbs. 1.70 - 2.30
tanks, works 100 lbs. 1.00 - —
47°, turbid, 1:2.9, dms., c.l., works 100 lbs. 1.95 - —
t.c.l., dms., works. 100 lbs. 2.55 - 2.80
tanks, works 100 lbs. 1.60 - —
52°, turbid, 1:2.4, dms., c.l., works lb. 2.30 - —
t.c.l., works 100 lbs. 2.75 - 3.00
tanks, works 100 lbs. 1.95 - —
solid, 1:3.2, bgs., works ton.57.50 - —
Silicofluoride, bgs., c.l., works lb. .070 - —
t.c.l., works lb. .07 - .08
Sodium silicofluoride in dms., 4/10c. higher.
Stannate, dms., works, frt. alld. E. lb. .465 - .519
Stearate, tech., dms., works lb. .40 - —
USP, dms. works lb. .70 - .75
Sulphanilate, bbls., works lb. .22 - —
Sulphate, NF, VII, dried, powd., dms lb. .22½- —
tech., anhyd., bgs., c.l., works, frt. alld. to $10. 100 lbs. 2.25 - —
t.c.l., works, same basis. 100 lbs. 2.50 - 3.00
rayon grade, bgs., c.l., works. ton.27.00 - —
t.c.l., works ton.33.00 - —
USP, cryst., fib dms. lb. .17½- .18
gran., fib, dms. lb. .17½- .18



There are still some users of 50% caustic soda who have neither switched to 73%, nor considered it, because they believe they are not set up to capitalize on its advantages.

However, with but few exceptions, substantial savings may await only the responsible person's decision to compare costs.

The amount of caustic soda you consume naturally influences the savings, but even small users may be able to save up to $1000 annually. Some large users save $35,000 per year and more. Your plant location also plays an important part in the amount of savings.

But it costs you nothing to find out now. Our technical staff will be glad to help you figure savings and to make recommendations. Call or write today!

DRY CAUSTIC USERS: Have you refigured your delivered costs of dry vs. liquid caustic soda in the light of recent increases? Many Columbia-Southern consumers are now realizing *substantial savings* by converting from flake to liquid. Initial cost of the installation required is low, usually paying for itself in savings within one year. Write us for details.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION
SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY
ONE GATEWAY CENTER, PITTSBURGH 22, PENNSYLVANIA

DISTRICT OFFICES: BOSTON • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • HOUSTON • MINNEAPOLIS • NEW ORLEANS • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO

Sodium sulphide, flake, dms., c.l., works, E., frt. equald..lb. .05¼- —
t.c.l., same basis ... lb. .05¾- —
fused, bbls., c.l., works, E., frt. equald lb. .04¾- —
t.c.l., same basis ... lb. .05¼- —
Sulphite, anhyd., bgs., c.l., works. 100 lbs. 3.00 - —
t.c.l. same basis ...100 lbs. 3.50 - —
powder, bbls., c.l., works 100 lbs. 7.25 - —
t.c.l., works ..... 100 lbs. 7.50 - —
Sulphocyanide, CP (see Sodium thiocyanate).
Sulphydrate, flake, 70-72%, dms., works, c.l lb. .06½- —
t.c.l., works ..... lb. .07 - —
liquid, 40-44%, tanks, works, basis 100% ton.110.00 - —
Tetraborate (see Borax.)
Tetrasulphide liquid, 40%, dms., c.l., works..lb. .03½- —
t.c.l., works ..... lb. .04 - —
Thiocyanate, CP dms ..... lb. .55 .65
tech., dms., works ..... lb. .377 - —
Thiosulphate, NF cryst., bbls lb. .12½ —
tech (see Sodium hyposulphite).
Titanate cns c.l works lb. .10½ —
5-ton lots, works ..... lb. .10¾- —
1 ton or less, works ..... lb. .11 - —
Trichloroacetate, 98% 100-lb. dms., c.l., frt. alld., E lb. .37½- —
t.c.l., frt. adjusted, E lb. .39½- —
50-lb. dms., c.l., frt. alld., E. lb. .38 - —
t.c.l., frt. adjusted, E lb. .40 - —
90%, 10-lb. cns., c.l., frt. alld., E lb. .44 - —
t.c.l., frt. adjusted, E lb. .46 - —
Prices West of the Rockies are 1¾c. per pound higher
Tripolyphosphate, bgs., c.l., works, frt equald 100 lbs. 8.25 - —
t.c.l. same basis ... 100 lbs. 8.45 - —
Trisilicate, powd., 1:3.2, bgs., c.l., works..100 lbs. 7.75 - —
t.c.l., works 100 lbs 8.50 8.90
dms., c.l., works .. 100 lbs 8.15 - —
t.c.l. works ... 100 lbs 8.90 9.30
Tristearate, fib, dms., 20-000-lb. lots, works lb. .33 - —
10,000 to 20,000-lb. lots, works. lb. .35 - —
smaller lots works lb .38 .40
Tungstate, tech., kgs., dlvd. E..lb. 2.65 - —
Sodium ammonium phosphate bbls., works, frt. equald lb. .23 - —
Sodium-carboxymethylcellulose See CMC.
Sodium-cinchophen (see Cinchophen-sodium).
Sodium-formaldehyde sulphoxylate, dms., c.l., dlvd. lb. .23½- —
t.c.l., same basis ..... lb. .24 - —
Sodium sulphs drugs (see Sulphs names).
Sodium-zirconyl sulphate, fiber dms., 1,000-lb. lots or more works lb. .28 - —
less than 1,000-lb lots, same basis lb. .30 - —
Solvent naphtha, coaltar, refined, tanks, works gal. .31 - .32
high flash, tanks, works gal. .31 .32
petroleum (see petroleum solvent, partial aromatic).
Sorbitan monostearate, fib, dms., 20,000-lb. lots, works lb. .32 - —
10,000 to 20,000-lb. lots, works, lb. .34 - —
smaller lots, works lb. .37 .39
Sorbitol cryst. pellets, dms., c.l., works lb. .30 - —
1 to 5-ton lots, works... lb. .32 - .33
powd., dms., 1 to 5-ton lots, works lb. .38 .39
solution, commercial, aqueous, dms., c.l., works..lb. .24½- —
ton lots works lb. .25 - —
less ton lots, works lb. .25¼- —
tanks, works lb. .23¼- —
regular, 70%, aqueous, dms., c.l., works..lb. .16 - —
ton lots, works ....lb. .16¾- —
less ton lots, works lb. .17 - —
tanks, works ..... lb. .15 - —
Soybean meal, 44% bulk, Decatur. ton.56.00 -56.50
protein, chemically isolated, 40,000 to 60,000-lb. lots, dlvd. lb. .23 - —
20,000 to 40,000-lb. lots, same basis..lb. .23¼- —
100 to 20,000-lb. lots, same basis .lb. .23½- —
mechanically refined, bgs., 40,000-lb. lots same basis. lb. .0605- —
20,000-lb. lots, same basis. lb. .0620- —
smaller lots, same basis. lb. .0635- —
Sparteine sulphate, cns ..... oz. .85 1.25
Spearmint leaves, bls.....lb. .75 - —
Spruce extract liq. reg., tanks, works lb. .01¾- —
powd., super, bgs., c.l., works. lb. .07 - —
t.c.l., works ..... lb. .05¾- —
Squill, red, fortified, powd., bbls., boxes lb. 1.60 - —
white, bls. ..... lb. .12 - .15
powd., bbls., bxs ..... lb. .18 - .21
St. John's bread, edible, bls.....lb. .13 - .15
Stannous chloride (see Tin chloride stannous)
Star root (see Helonias root)
Stargrass root (see Aletris root)
Starch, corn, pearl, paper bgs., c.l., N. Y. 100 lbs. 7.14 - —
t.c.l. ..... 100 lbs. 7.29 - —
powd., paper bgs., c.l. 100 lbs 7.26 - —
t.c.l. .....100 lbs. 7.32 - —
Prices for corn starch in cotton bags 25c. per 100 lbs. higher.
Potato, dom., Idaho, bgs., c.l., works..lb. .07¼- —
Maine, bgs., c.l., works....lb. .06½- .06¾
t.c.l., spot .....lb. .08½- .09
Rice, t.c.l., bgs .....lb. .16 - .17
Wheat, bgs. .....lb. .0755- .0780
Stavesacre seed bgs ..... lb. .60 - .61
Stearine oleo (see Oleostearine.)
Stomach substance, not USP, fin. dms lb. 2.95 - 3.10
Storax, USP, cs ..... lb. .85 - 2.05
Stramonium leaves, bgs.....lb. .19 - .24
Streptomycin hydrochloride, bulk, gm. .17 - —
Sulphate, bulk .....gm. .17 - —
Strontium bromide, NF, cns., dms. lb. .77 - .78
Carbonate, pure, dms., 5-ton lots or more, works. lb. .33 - —
1-ton lots, works.....lb. .37 - —
tech., dms., works ..... lb. .19 - —
Chromate, bbls works.....lb. .46 - —
Iodide, jars, 25-lb. lots.....lb. 3.42 - —
Nitrate, bbls., cs., works....lb. .11 - .12
Oxalate, bbls. works ..... lb No prices.
Salicylate NF dms ..... lb. 1.65 —
Sulphate, air floated 90%, 325 mesh bgs. works ton.56.70 -66.15
Strontium-calcium sulphide phosphorescent, dms., works lb 2.83 2.85
Strophanthin, NF bots oz.25.00 -25.50
Strophanthus seed, Kombi, biologically tested, bgs..lb. 3.50 - 3.75

Strychnine, NF, powd., cans, 100-oz. lots, oz. 1.10 - —
Phosphate, NF 100-oz. lots ...oz. 1.14 - —
Sulphate, USP, powd., cans 100-oz. lots oz. .85 - —
Styrene monomer, dms., c.l., works lb. .22¼- —
t.c.l., works ..... lb. .23¼- —
tanks, works ..... lb .21 —
Styrolyl acetate, bots.....lb. 1.45 - 1.70
Sucrose octa-acetate, denaturing grd., 100-200-lb bgs., t.c.l., works lb .71 - —
Sugar coloring (see Caramel coloring).
Sugar of milk (see Milk sugar).
Sulphabenzamide dms ..... lb 4.00 4.50
Sodium, dms ..... lb 4.10 4.60
Sulphacetamide fiber dms ..... lb 4.00 4.20
Sodium fib dms ..... lb. 5.00 5.20
Sulphadiazin, USP, microcrystals, dms lb 10.60 11.10
powder, dms. ..... lb..10.25 -10.75
Sulphadiazin-sodium, USP, dms lb 11.25 11.75
micro crystals dms lb 10.60 11.10
Sulphaguanidin, USP, dms.....lb. 2.50 - —
Sulphamerazin USP micro crystals. lb 10.65 -11.15
Sulphamerazin-sodium USP, dms. lb 11.25 -11.75
Sulphamethazine, micro crystals, dms lb 8.90 9.40
powder, dms ..... lb 8.50 9.00
Sulphanilamide, USP, 30-80 mesh., dms lb 1.40 1.60
microcrystals, dms. ..... lb. 1.70 - 1.90
powder, dms ..... lb 1.30 1.50
Sulphanilamidoquinoxaline, veterinary, dms lb 6.50 6.75
Sulphapyridin NF powd. bots. tins. lb 7.00 7.50
Sulphapyridin-sodium monohydrate dms lb 7.50 8.00

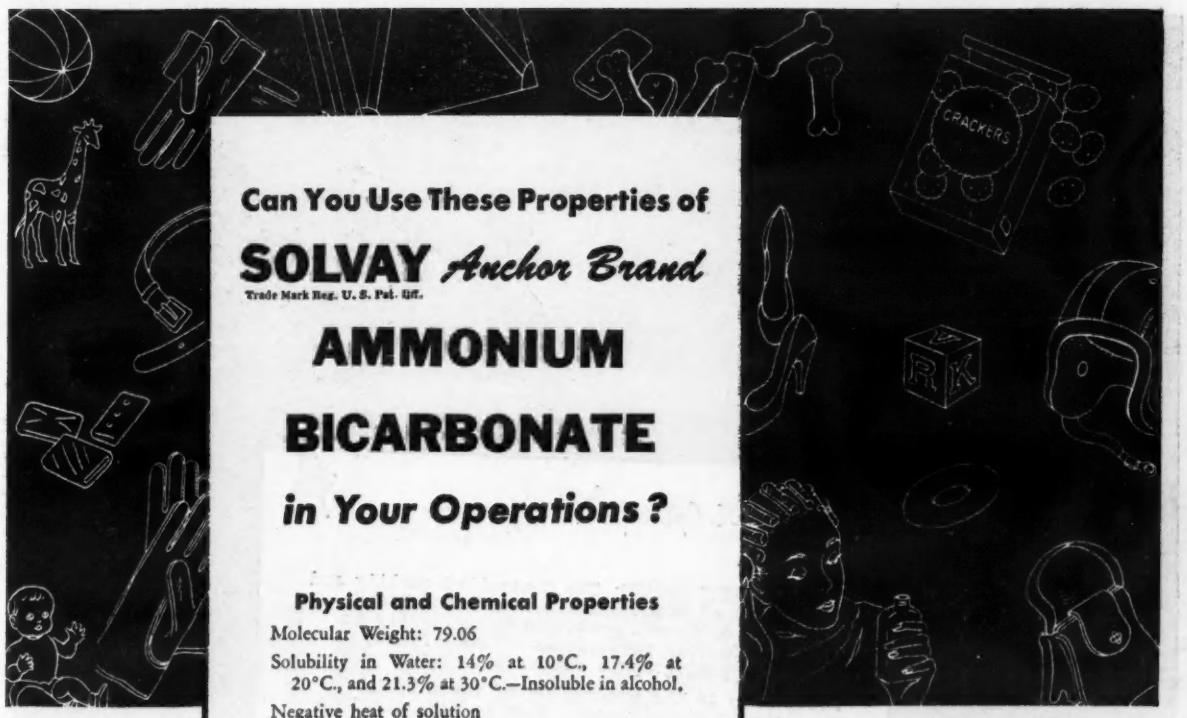
Sodium Sulphide—Talc, Vermont Off Color

Sulphathiazole, USP, micro crystals, dms lb. 3.15 - 3.30
powder, dms. ..... lb. 2.80 - 2.95
Sulphathiazole-sodium, USP, dms., lb. 3.05 - 3.20
Sulphur, commercial, flour, bgs., mines .100 lbs. 2.30 - —
bbls., mines .....100 lbs. 3.05 - —
lump, bgs., mines.....100 lbs. 2.20 - —
bbls., mines.....100 lbs. 2.65 - —
crude, bulk, c.l., mines, contract. long ton.25.50 -27.50
export, f.o.b. vessels, Gulf ports long ton28.00 -30.50
domestic and Canada, f.o.b. vessel Gulf port long ton.27.50 -30.50
refined, flowers, USP, bgs., mines. 100 lbs. 4.00 - —
bbls. .....100 lbs. 5.25 - —
flour, light, bgs., mines..100 lbs. 3.60 - —
bbls., mines ....100 lbs. 4.50 - —
lump, bgs., mines .100 lbs. 3.30 - —
rolls, bgs., mines....100 lbs. 3.85 - —
bbls., mines .....100 lbs. 4.40 - —
salt block, bgs., mines.100 lbs. 3.35 - —
virgin block, bbls., mines. 100 lbs. 3.45 - —
rubbermarkers, com'l, regular bgs., mines 100 lbs. 2.40 - —
bbls., mines 100 lbs. 3.55 - —
98-100% passing through 325 mesh, bgs., mines 100 lbs. 2.50 - —
bbls., mines .....100 lbs. 3.65 - —
refined, bgs., mines .100 lbs. 3.25 - —
bbls., mines .....100 lbs. 4.30 - —
treated, 2.5% mineral oil, bgs., mines .100 lbs. 2.70 - —
bbls., mines .....100 lbs. 3.85 - —
10% pine tar, bgs., mines. 100 lbs. 3.90 - —
lb. .24 - —
refrigeration cyls, t.c.l. dlvd.

Sulphur dichloride, dms., c.l., works, frt. equald..lb. .03¾- —
t.c.l., same basis ..... lb. .04½- —
tankcars, same basis.....lb. .03½- —
Dioxide liquid, com'l. cyls., works lb. .09 - —
multi unit cars, works ..lb. .0535- —
tanks works ..... lb. .045 - —
Monochloride, 55-gal. dms., c.l., frt. equald..lb. .03¾- —
t.c.l., same basis..... lb. .04½- —
tanks, same basis ..... lb. .03½- —
Washed, NF, bot ..... lb. .11 - —
Sumac leaves, 28%, bgs., ex-dock, ton.120.00 - —
ground, ex-dock.....ton.120.00 - —
Superphosphate run of pile under 22% a.p.a. pulv., bulk, c.l., Baltimore unit-ton. .88 .91
Carteret, N. J.... unit-ton. .88 - .91
triple 48% or more, a.p.a. pulv., bulk, c.l., East Tampa, Fla. unit-ton. .98 - —

T

2,4,5-T, dms., c.l., works ..... lb. 1.40 - —
t.c.l., works ..... lb. 1.45 - 1.50
Isopropyl ester dms. c.l., works lb. 1.45 - —
t.c.l., works .....lb. 1.50 - 1.57
Talc, dom., ordinary, Calif., grd. bgs., c.l., works ton.32.00 -38.50
Vermont off color grd., bgs., c.l., works ton.14.00 - —
t.c.l., works .... ton.17.50 - —



Can You Use These Properties of

SOLVAY *Anchor Brand*

Trade Mark Reg. U. S. Pat. Off.

AMMONIUM BICARBONATE

in Your Operations?

Physical and Chemical Properties

Molecular Weight: 79.06

Solubility in Water: 14% at 10°C., 17.4% at 20°C., and 21.3% at 30°C.—Insoluble in alcohol.

Negative heat of solution

Stability: Relatively stable at room temperatures. Rapidly and completely volatile at 140°F. and above. Rate of decomposition increases as temperature rises. The gases formed in this process are as follows:

Ammonia gas (NH_3) 21.5%
Carbon dioxide gas (CO_2) . . 55.7%
Water vapor (H_2O) 22.8%

pH of 1/10 N solution at 25°C.: 7.8

Appearance: White Crystals

Quality: Exceptionally pure. Food grade. Can be used as a reagent. Very low metal content.

Some Typical Uses of Anchor Brand AMMONIUM BICARBONATE

Fluffing and Adding Bulk to Cookies, Biscuits, Baked Pet Foods

Manufacturing Sponge Rubber

Creating special forms of Plastics and other Materials

Cold Wave Solutions

Chrome Leather Tanning

From biscuits to plastics . . . from chrome leather processing to cold wave solutions—these are the varied fields in which Solvay "Anchor Brand" Ammonium Bicarbonate has already found important use. The properties and unusual features of this versatile product suggest many other uses; it may find application in *your* operations.

Solvay "Anchor Brand" Ammonium Bicarbonate is a safe, low cost source of ammonia and carbon dioxide. It can be used to create voids, decrease density and add bulk in plastic materials. It is an exceptionally efficient neutralizing agent, although it has an unusually low pH. It has higher neutralizing value than either borax or sodium bicarbonate—and yet a 1/10 normal solution at 25°C. has a pH of only 7.8. And—because "Anchor Brand" Ammonium Bicarbonate volatilizes completely at relatively low temperatures—it leaves no residue to affect the end product.

For samples and more detailed technical information, fill in and mail coupon.

SOLVAY

Soda Ash • Caustic Soda • Chlorine • Potassium Carbonate • Calcium Chloride • Caustic Potash • Sodium Bicarbonate • Ammonium Bicarbonate • Specialty Cleansers • Sodium Nitrite • Para-dichlorobenzene Ortho-dichlorobenzene • Monochlorobenzene Ammonium Chloride • Sesquicarbonate of Soda

SOLVAY PROCESS DIVISION

Allied Chemical & Dye Corporation

61 Broadway, New York 6, N. Y.

I am interested in the possible use of Solvay "Anchor Brand" Ammonium Bicarbonate in my operations. Please send me, without cost or obligation, samples and further technical information.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____ BC-11

Talc, Fibrous—Unicorn Root

Talc, fibrous, New York, grd., bgs., c.l., works ton 25.00 - 30.00
l.c.l. ton 28.00 - 35.00
99.5% 325 mesh, bgs. c.l., works ton 27.00 - —
l.c.l., works ton 30.00 - 32.00
99.95%, micronized, bgs. works ton 38.00 - —
Imp Canadian grd., bgs. c.l., mines ton 15.25 - 35.00
Tallow, edible, tanks, dlvd lb. .12½ Nom.
inedible, extra, tanks, dlvd lb. .05¾- —
fancy, bleachable, tanks, dlvd. lb. .06 - —
No. 1, tanks, dlvd lb. .04⅞- —
special tanks, dlvd lb. .05½- —
sulphonated, 25%, dms., l.c.l. lb. .05¾- .07
50%, dms., l.c.l. lb. .07½- .08
Tankage, animal, feeding, 9-11% ammo., bulk unit-ton. 6.00 - —
Chicago unit-ton. 6.75 - —
Tapioca flour, Brazilian, ex whse, bgs lb. .14½- .17
Java, AAA, bgs., ex whse., bgs. lb. .08 - .08½
AA, bgs., ex-whse lb. .07½- .08
Tar acid oil, 15-18% dms., c.l., trt. equald gal. .47 - .49
l.c.l., same basis gal. .50 - .51
tanks, same basis gal. .39 - —
25-28% dms., c.l., same basis, gal. .54 - .56
l.c.l., same basis gal. .57 - .58
tanks, same basis gal. .46 - —
50-53% dms., c.l., same basis, gal. .70 - .72½
l.c.l., same basis gal. .73½- .74½
tanks, same basis gal. .62½- —
Coal (see Coaltar).
Pine (see Pinetar).
Tartar emetic tech. gran. or powd., dms lb. .56 - .59
USP, powd., dms lb. .61 - .62
Terpin hydrate com'l bbls., c.l lb. .24½- —
l.c.l. lb. .25 - .25½
NF, cryst., fib. dms lb. .57½- .62
powd., fib., dms lb. .65 - .69
Terpineol alpha (see A)
Commercial, dms., c.l., South lb. .13½- —
l.c.l., South lb. .14 - —
extra, dms lb. .41 - .60
prime, dms lb. .30 - .45
Terpinglycol ether, dms., c.l., works. lb. .23½- —
l.c.l. works lb. .25½- —
tanks, works lb. .22 - —
Terpinyl acetate, extra, cns., dms. lb. .55 - .75
prime, dms lb. .55 - .70
Propionate, dms lb. 1.75 - 3.00
Terra alba (see Gypsum).
Testosterone, USP, 100-gm. lots, bots gm. .79 - —
Propionate, USP, 100-gm. lots, bots gm. .79 - —
Tetrachloroethane, dms., works lb. .14½- —
Tetrachloroethylene, tech. (see Perchloroethylene).
USP, 55-gal. drs., works lb. .20½ .21½
smaller, dms., works lb. .23½ .25
Tetraethyl orthosilicate, dms., c.l., works lb. .71 - —
l.c.l. lb. .72 - —
Pyrophosphate, 40%, cns., dms., frt. equald lb. .69 - —
Tetraethylenepentamine dms., c.l., dlvd., E lb. .57½- —
l.c.l., dlvd E lb. .58½- —
tanks, dlvd. E lb. .56 - —
Tetrapotassium phosphate, (see Potassium phosphate).
Tetrasodium pyrophosphate (see Sodium pyrophosphate).
Thallium metal, dlvd lb. 12.50 -15.00
Salicylate, fib. dms lb 4.25 - —
Sodio-salicylate, fib. dms lb. 2.90 - —
Sulphate, 99%, bots., dlvd lb 10.50 -13.00
Theobromine, NF, fib. dms lb. 3.00 - —
And sodium acetate, USP, fib. dms. lb. 3.55 - 3.60
Salicylate, fib. dms lb 4.00 - —
Sodio-salicylate, NF, fib. dms lb. 2.90 - —
Theophylline, anhydrous or USP, 100-lb. dms lb. 3.15 - 4.00
Thiamine hydrochloride, USP, regular or ampul-type, fib. dms, kilo.135.00 - —
Mononitrate, USP, fib. dms kilo.135.00 - —
Thiocarbanilide, dms lb. .50 - .52
Thiodiphenylamine (see Phenothiazine).
Thiophene, dms., c.l., works lb. No stocks
Thiourea, tech., dms., c.l., works lb. .40 - —
l.c.l., works lb. .42 - —
Thorium nitrate, purified, fib. dms., 100-lb. lots or more, works lb. 3.50 - —
Threonine dextro laevo, bots., 1-kilo lots kilo.600 00 - —
Thyme, French, bgs lb. .21 - .25
Spanish, bls. lb. .10 - .10½
Thymol, fib. dms lb. 3.00 - 3.25
Timbo root (see Cube root).
Tin chloride stannous anhyd., dms., works lb. .805 - 1.013
Crystals, hydrous, dms., works. lb. .79 - .83
Metal (Straits) lb. .82¼- —
Oxide, dms. lb. .84½- .85½
Sulphate, stannous, bbls lb. .866 - .886
Tetrachloride, anhyd., dms., works. lb. .705 - .715
Titanium dioxide anatase, chalk resistant, bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
ceramic, bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
regular, bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
metallurgical, natural, granular, bgs., c.l., f.o.b. Jacksonville, Fla ton.120.00 - —
Niagara Falls, N. Y. ton.137.50 - —
5-ton lots, same basis. ton.142.50 - —
ton lots, same basis. ton.147.50 - —
Milled titanium dioxide $7.50 per ton higher.
Rutile, non-chalking, bgs., c.l., dlvd. E lb. .34½- —
l.c.l., dlvd. E lb. .25½- —
Hydride, cns., works lb. 7.95 - 9.00
Titanium pigment, calcium-rutile base, bgs., c.l., dlvd lb. .08¾- —
l.c.l., dlvd. lb. .08¾- —
Tetrachloride, tech., dms., c.l., works lb. .45½- —
l.c.l., works lb. .48½- .56½
tankcars, works lb. .44½- —
Toliain base, distilled, kgs lb 1.30 - —
Tolu balsam, cns., dms lb. 2.50 - 3.25
Toluene (see Toluol)
Toluol, coaltar, industrial or nitration, tanks, works:—
Bethlehem, Pa. gal. .34 - —
Birmingham dist. gal. .32 - —
Chicago dist. gal. .35 - —
Cleveland, dist. gal. .34½- .35
Geneva, Utah gal. .26 - —
Johnstown, Pa. gal. .32 - —
Lackawanna, N. Y. gal. .35 - —
Lone Star, Tex gal. .35 - —
Lorain, Ohio gal. .33 - —
Philadelphia, Pa. gal. .35 - —
Pittsburgh dist. gal. .32 - —
Sparrow's Point, Md. gal. .34 - —
Terre Haute, Ind gal. .35 - —
Youngstown, Ohio gal. .32½- .33
Petroleum, industrial, 2" tanks, works, Albany, N. Y. gal. .35 - —
Bayonne, N. J. gal. .35 - —
Baytown, Tex. gal. .33 - —
Chicago, Ill. gal. .35 - —
Detroit, Mich gal. .35 - —
Philadelphia, Pa. gal. .35 - —
Providence R. I. gal. .35 - —
Wood River, Ill. gal. .35 - —
Tonka beans, Angostura, cks lb. 1.65 - 1.80
Brazilian, Surinam, cs lb. 1.00 - 1.25
Totaquine, 100-oz. lots, cns oz. .42 - —
Toxaphene, dms., c.l., works lb. .17 - —
truckloads, works lb. .17 - —
ton to truckloads, works lb. .20 - —
smaller lots, works lb. .23 - —
Triacetin, dms., c.l., dlvd. E, of Rockies lb. .47¼- —
l.c.l., same basis lb. .48¼- .49¼
tanks, same basis lb. .45¼- —
Tributyl citrate, tech., dms., c.l lb. .40½- —
l.c.l. lb. .41½- —
tanks lb. .39 - —
Phosphate, dms., c.l., works lb. .36 - —
l.c.l., same basis lb. .52¾- .64½
tanks lb. .50 - —
Tributylamine, dms., c.l., works. lb. .74 - —
l.c.l., same basis lb. .75 - —
tanks, same basis lb. .72 - —
Trichlorobenzene, dms., c.l., works, frt. alld lb. .14½- —
l.c.l., frt. alld lb. .15½- —
tanks, frt. alld lb. .13 - —
Prices in the West 1¾c. higher.
Trichloroethylene, dms., c.l., or truckloads, works, frt. equald. lb. .11¼- —
dlvd. E lb. .12½- —
l.c.l., dlvd. E lb. .13½- —
tanks, works, frt. equald lb. .10¼- —
dlvd. E lb. .11 - —
Trichloroethane, dms., c.l., works. lb. .13 - —
l.c.l., works lb. .13½- —
tanks, works lb. .11½- —
Tricholine citrate, 65% solut., ret. cbys., works, frt. adjusted. lb. 1.40 - 1.45
Tricresyl phosphate, coaltar, dms., c.l., dlvd lb. .35 - —
l.c.l., dlvd. lb .36 - —
tanks, dlvd. lb. .33 - —
petroleum, dms., c.l., dlvd lb. .35 - —
l.c.l., dlvd. lb. .36 - —
tanks, dlvd. lb. .33 - —
Triethanolamine, dms., c.l., dlvd. E lb. .26¼- —
l.c.l., same basis lb. .27¼- —
tanks, same basis lb. .24½- —
Triethylamine, dms., c.l., works, dlvd. E lb. .47 - —
l.c.l., same basis lb. .48 - —
tanks, same basis lb. .45 - —
Triethyl phosphate, dms., c.l., works. lb. .38 - —
l.c.l., same basis lb. .39 - —
tanks, same basis lb. .37 - —
Triethyleneglycol, dms. c.l., dlvd E. lb. .23¼- —
l.c.l., same basis lb. .24¼- —
tanks, same basis lb. .21½- —
Triethylenetetramine, dms., c.l., dlvd. E lb. .48½- —
l.c.l., dlvd. E lb. .49½- —
tanks, dlvd. E lb. .47 - —
Trimethylamine, 25-40%, dms., c.l., works, frt. equald, basis 100% lb. .38 - —
l.c.l., works, frt. equald, basis 100% lb. .38½- —
tanks, works, frt. equald., basis 100% lb. .33 - —
Tripentaerythritol, bgs., c.l., works. lb. .36½- —
l.c.l., same basis lb. .39½- —
Triphenyl phosphate, bbls., c.l., frt. equald lb. .39 - —
l.c.l., frt. equald lb. .40 - —
Triphenylguanidine, bbls., works lb. .90 - —
Tripoli, air floated, bgs., c.l., works. lb. .02 - —
double grd., bgs., c.l., works lb. .0185- —
single grd., bgs., c.l., works lb. .0175- —
Tripropyleneglycol, dms., c.l., frt. alld lb. .26¼- —
l.c.l., frt. alld lb. .27¼- —
tanks, frt. alld lb. .24½- —
Trisodium fluoroacetate (see Sodium fluoroacetate, tribasic).
Trisodium phosphate (see Sodium phosphate tribasic).
Trypsin, pharmaceutical, 1:80, dms., works lb. 3.00 - 5.50
Tryptophane dextro-laevo, fib. ctns. works kilo.165.00 - —
Tuba root (see Cube root).
Tungsten metal, powd., 99.9%, dms. works lb. 7.75 - —
Turpentine, gum and wood (see Protective Coatings market, Naval Stores).
Tyrothicin, USP, bots lb. .75 - .85

U

Urethane, USP dms lb 1.80 - —
Unicorn root false (see Helonias root)
True (see Aletris root)

Constant control of quality

Quality control is a continuous job. It is carried out with modern equipment and painstaking attention to detail in every phase of the production of Nialk chemicals.

for example...

NIALK CAUSTIC POTASH: The controlled quality and uniformity of NIALK Caustic Potash and NIALK Carbonate of Potash contribute importantly to the satisfactory performance of many highly sensitive photographic baths.

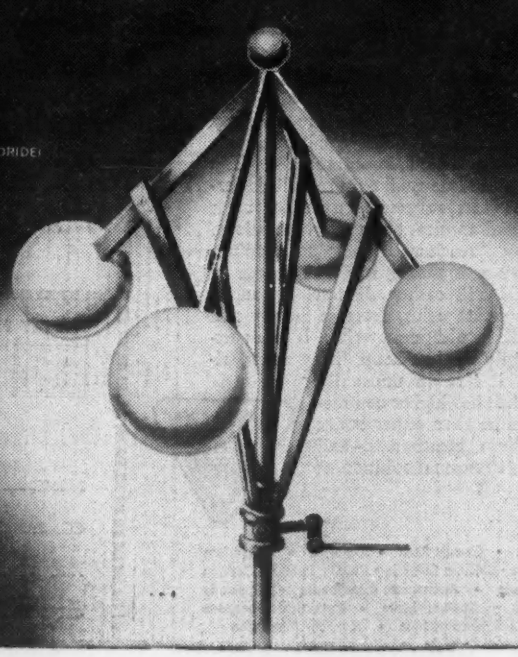
Every step in the production of these NIALK products is rigidly controlled to give absolute satisfaction in many types of applications.

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, New York

Nialk®

LIQUID CHLORINE
CAUSTIC POTASH
CARBONATE OF POTASH
PARADICHLOROBENZENE
CAUSTIC SODA
Trichloroethylene
NIAGATHAL (TETRACHLORO PHTHALIC ANHYDRIDE)



Urea, dom., 46% N, bgs., c.l., works, lb. .06 - —
l.c.l., works lb. .06½- —
45% N, bgs., c.l., 30 tons, frt alld, Kan., Neb., N. Dak., Okla., S. Dak., Tex., and E. ton.154.00 - —
l.c.l., dlvd. ton.162.00 - —
Urea-ammonia liquor, A and B grades, N basis, tankcars, Belle, W. Va. ton.128.00 - —
C grade, tankcars, same basis, ton.126.50 - —
37 grade, tankcars, same basis, ton.155.50 - —
Uva ursi leaves, bls. lb. .12 - .14

V

Valerian root, Belgian, bgs. lb. .38 - .40
Valine, dextro-laevo, dms., works lb.21.00 -27.50
Valonia, beards, 40-42% tannin, bgs., ex dock. ton.76.00 - —
cups, 28-30% tannin, bgs., ex dock, ton.56.00 -57.00
extract, powd., 62% tannin, bgs., ex dock, duty extra lb. .05½- —
Vanadium pentoxide, tech., dms., works lb. 1.23 - 1.33
Vanilla beans, Bourbon, tins lb. 6.00 - 6.50
Mexican, cuts, tins lb. 6.50 - 6.75
whole, tins lb. 6.50 - 6.75
Tahiti, cs. lb. 4.75 Nom.
Vanillin, ex eugenol, tins, 25-lb. lots, lb. 6.50 - 6.75
smaller lots lb. 6.90 - 7.25
ex guaiacol, tins, 25-lb. lots lb. 3.00 - —
smaller lots lb. 3.05 - 3.15
ex lignin, tins, 25-lb. lots lb. 3.00 - —
smaller lots, cins lb. 3.05 - 3.15
Vinyl acetate, 55-gal. dms., c.l., dlvd. E. lb. .17½- —
l.c.l., dlvd E lb. .18½- —
tanks, dlvd. E lb. .15½- —
Butylether, normal, tech., dms., c.l., works lb. .28 - —
l.c.l., works lb. .30 - —
tanks, works lb. .27 - —
Ether (see Ether Vinyl)
Ethylether, tech., dms., c.l., works, lb. .26 - —
l.c.l., works lb. .28 - —
tanks, works lb. .25 - —
Isobutylether, tech., dms., c.l., works lb. .28 - —
l.c.l., works lb. .30 - —
tanks, works lb. .27 - —
Methylether, cyls., works lb. .23 - —
tanks, works lb. .20 - —

Cylinders are sold outright, or if shipped against deposit, a free period of 60 days is allowed; and if empties are returned prepaid and in good condition within that period, full refund is made.

Pyridin, ret. dms., works lb. 1.50 - —
Trichloride, (see Trichloroethane).
Viosterol, in alcohol, 1,000,000 D units per gm., bots., lots of 10 billion USP units, 1,000,000 units. .023 - —
lots of 1 billion USP units, 1,000,000 units. .03 - —
lots of less than 1 billion USP units 1,000,000 units. .035 - —
in natural vegetable oil, 400,000 to 1,000,000 D units per gm., bots., lots of 10 billion USP units, 1,000,000 units. .02 - —
lots of 1 billion USP units, 1,000,000 units. .025 - —
lots of less than 1 billion USP units, 1,000,000 units. .03 - —
Vitamin A synthetic, acetate, crystalline, beads, 500,000 A units per gm gm. .07¼- —
liquid, in oil 1,000,000 A units per gm, 1,000,000 units. .12 - —
natural, concentrates (see Oil, fishliver).
Palmitate, liquid 1,000,000-1,800,000 A units per gm, 1,000,000 units. .12 - —
in oil, 1,000,000 A units per gm 1,000,000 units. .12 - —
B (see Thiamine hydrochloride).
B, (see Riboflavin).
B complex, natural (see Rice bran concentrate and Yeast).
B_6 (see Pyridoxine hydrochloride).
B_{12} crystalline gm. or 5 gm. vials gram 295.00 - —
oral grade solids, in containers of 1 and 5 grams of B_{12} activity gm.225.00 - —
C (see Acid, ascorbic).
D (see Oils, codliver and fishliver, Calciferol, and Viosterol).
D_2 (see Calciferol).
E (see Alphatocopherol and Oil, wheatgerm).
G (see Riboflavin).
H (see Biotin).
K, Active (see Menadione).
K_1, 25 gm bots gram 4.50 - —
Violet methyl toner (see Blue methylviolet toner.
V.M.&P. naphtha (see Petroleum naphtha).

W

Wahoo root bark, bls. lb. 2.30 - 2.50
Warfarin 0.5%, dms., 50 lb lots, dlvd lb. 1.95 - —
25-49 lb. lots, f.o.b., N.Y., or Chi lb. 2.05 - —
5-24 lb. lots, cns. f.o.b., N. Y., or Chi lb. 2.15 - —
Wattle bark, fair average, or E. African, bgs., ex dock ton.100.00 - —
merchantable bgs., ex dock ton.96.50 - —
extract, liquid 35% tannin bbls., lb. .09¾- .10
solid, E. Africa, 60% tannin, bgs., ex dock, duty extra lb. .10 - —
S. Africa, 60% tannin, ex-dock, duty extra lb. .10 - —
Wax amorphous (see Wax microcrystalline)
Bayberry bgs, spot lb. .42 - .43
Bees, crude, African, bgs. lb. .47 - .48
Brazilian bgs lb. No stocks.
Central American, bgs lb. .56 - .57
Chilean, bgs lb. 57 - .58
refined, bleached, white, bricks lb. .65 - .67
slabs lb. .63 - .65
yellow, bricks lb. .58 - .60
slabs lb. .56 - .57
Candelilla, crude, bgs. lb. .75 - .77
refined, bgs lb. .77 - .79

Powdered candelilla, 20 mesh, 5c. per lb. higher; 80 mesh, 5½c.; 100-200 mesh, 6c.

Carnauba, chalky, bgs., ton lots, lb. .85 Nom.
North Country, No. 2, bgs., ton lots lb. .94 Nom.
No. 3, crude, bgs., ton lots lb. .87 - .89
refined, bgs., ton lots lb. .92 - .94
Yellow, No. 1 Ceara, bgs., ton lots lb. 1.19 - 1.21
No. 2, Ceara, bgs., ton lots, lb. 1.17 - 1.19

Powdered carnauba wax price differentials same as powdered candelilla.

Wax, esparto, African lb. .72 - —
Japan, bgs lb. .22 - .23
Microcrystalline, 170°-175° m.p., ASTM, amber, ctns., 20,000 lbs., group 3, works lb. .13 - .14
smaller lots, same basis, lb. .14 - .15
black, ctns., 20,000 lbs., same basis lb. .11½- .12½
smaller lots, same basis, lb. .12½- .13½
white, ctns., 20,000 lbs., same basis lb. .24 - .25
smaller lots, same basis, lb. .25 - .26
180°-185° m.p., ASTM, amber, ctns., 20,000 lbs., same basis lb. .16 - —
smaller lots, same basis, lb. .17 - —
black, ctns., 20,000 lbs., same basis lb. .14½- —
smaller lots, same basis, lb. .15½- —
white, ctns., 20,000 lbs. same basis lb. .27 - —
smaller lots, same basis, lb. .28 - —
190°-195° m.p., ASTM, amber ctns., 20,000 lbs., same basis lb. .20 - —
smaller lots, same basis, lb. .20½- —
black, ctns., 20,000 lbs., same basis lb. .18 - —
smaller lots, same basis, lb. .18½- —
white, ctns., 20,000 lbs., same basis lb. .33½- —
smaller lots, same basis, lb. .34½- —
Wax, montan, dom., refined, bgs. lb. .31 - .32
imported, crude, Bohemian, bgs. lb. .12¼- .13
German, bgs lb. .13 - .13½
Ouricury, ref., bgs lb. .78 - .80
Paraffin (see P).
Spermaceti, blocks, cs lb. .25½- .31
cakes, cs lb. .26½- .32
Sugar cane, dom., ref'd., slabs, works lb. .75 - .80
spot lb. .77¼- .82¼
White lead (see Lead, white).
White pine bark, rossed, bls. lb. .20 - .22
White precipitate, USP powd., dms., lb. 5.00 - —
Whiting (see calcium carbonate).
Wild cherry bark, thin, natural, bls. lb. .18 - .19
rossed, bls lb. .19 - .22
Ginger (see Snake root, Canada).
Witch hazel bark, bls lb. .15 - —
leaves, bls lb. .21 - .23
Woodflour, 40 mesh, bulk, c.l., works, East ton.32.00 - —
l.c.l., same basis ton.36.80 - —
60 mesh, bulk, c.l., same basis ton.37.00 - —
l.c.l., same basis ton.42.00 -55.00
80-100 mesh, bulk, c.l., same basis ton.45.00 -50.00
l.c.l., same basis ton.51.75 -57.50
Woodflour in bgs, extra, returnable.
Woolfat, crude (see Degras), USP (see Lanolin).
Wormseed, American, bgs. lb. .30 - .35
Levant, bgs lb. 4.25 - 4.50

X

Xylene (see Xylol).
Xylenol, cryst., 56°-58°C., m.p., ret. dms., l.c.l., works, frt. equald, 45°-47°C., dms., c.l., same basis, lb. .212 - —
l.c.l., same basis lb. .215 - —
tanks, same basis lb. .199 - —
Xylenol, cryst., fractions, over 7°C., m.r., except meta, dms., c.l., same basis gal. 1.31 - —
l.c.l., same basis gal. 1.34 - —
tanks, same basis gal. 1.20 - —
meta fraction, over 7° C., dms., c.l., same basis gal. 1.46 - —
l.c.l., same basis gal. 1.49 - —
tanks, same basis gal. 1.35 - —
Xylidins, mixed, dms. lb. .30 - .50
Xylol, coaltar industrial, tanks works
Bethlehem, Pa. gal. .35 - —
Birmingham district gal. .32 - —
Chicago district gal. .35 - —
Cleveland district gal. .35 - —
Geneva, Utah gal. .27 - —
Johnstown, Pa. gal. .33 - —
Lackawanna, N. Y. gal. .35 - —
Lone Star, Tex. gal. 35 - —
Lorain, Ohio gal. .33 - —
Minnequa, Colo gal 34 - —
Philadelphia, Pa gal. .36 - —
Pittsburgh district gal. .32 - —
Sparrows Point, Md. gal. .35 - —
Terre Haute, Ind gal 35 - —
Youngstown, O. gal. .32½- —

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Chicago, Ill. gal. .35 - —
Philadelphia Pa. gal. .35 - —
Providence R. I. gal. .35 - —
Wood River, Ill. gal. .35 - —

Y

Yara yara, ens lb. 2.15 - 2.65
Yeast, brewer's, dry, USP, 90 Int'l B units per gram, 100-lb dms lb. .47 - —
90 Int'l B units per gram, 100-lb dms lb .52 - —
200 Int'l B units per gram, 100-lb dms lb. .56 - —
300 Int'l B units per gram, 100-lb dms lb .60 - —
Yellow, barium chromate, CP, bgs., l.c.l., dlvd N of Tenn and N C., E of Miss., including Davenport, Minneapolis, Rock Island St Louis St Paul lb .35 - —

Barium chromate yellow price differentials in other States and city zones are those for chrome yellow below

Benzidin, AAA, bbls., dlvd . lb. 1.91 - —
AAOT bbls. lb 2.15 - —
Cadmium, CP, all shades, bbls., frt. alld. E. of Rockies, lb. 2.85 - —
Yellow, cadmium lithopone, all shades, bbls., frt. alld., E. of Rockies lb. 1.20 - —

Cadmium yellows, Los Angeles, and San Francisco ex whse. 1c per lb. higher.

Chrome, CP, bbls., dlvd. N. Tenn. and N C., E. of Miss., including Davenport, Minneapolis, Rock Island lb. .31 - —

Dlvd. Ala., Fla., Ga., La (Shreveport, 1¼c. higher); Miss., N C., S C., Penna., Dallas, Tex., 1¼c higher; Ft. Worth, Tex., 1½c. higher; El Paso, Tex 2c. higher; Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph 1.6c. higher dlvd. Pac. Coast; for Denver Pueblo Salt Lake City Wichita prices are equalized with Chicago.

Hansa, 10 G, bbls., same basis, chrome lb. 2.15 - —
G pigment, bbls lb. 1.91 - —
Iron oxide, natural, French type, bgs., c.l., works lb. .05¼- —
Peruvian type, bgs., l.c.l. lb. .038 - —
pure, bgs., c.l., works lb. .10½- —
l.c.l., works lb. .10¾ —
Mercury oxide, bbls., 1,000-lb. lots. lb. 4.15 - —
smaller lots lb. 4.17 - —
Ocher (see yellow iron oxide, natural).
Zinc (chromate), bbls., dlvd lb. .25 - —
basic, dlvd. lb. .30 - —
Yerba santa leaves, bls. lb. .40 - —
Yohimbine hydrochloride, bots., tins oz 4.75 5.25

Z

Zein, bgs., 30,000-lb. lots, works lb. .38 - —
1,000 to 30,000-lb lots, works lb. .40 - —
smaller lots, works lb. .43 - —
Zinc acetate, tech., bbls., dms., works lb. .27 - —
NF VIII, dms lb. .53 - —
Borate, bgs., c.l., dlvd. E lb. .192 - —
l.c.l., dlvd E lb. .202 - —
Carbonate, tech., rubbermakers, bgs., c.l., works lb. .14½- —
l.c.l., works lb. .15 - —
Chloride, NF, gran., dms lb. .42 - —
precipitated, powd., dms lb. .26 - —
solution 50% dms. c.l., works. 100 lbs. 5.50 - —
l.c.l., works 100 lbs. 6.10 - —
tanks, works 100 lbs. 4.85 - —
tech., fused, dms., c.l., works 100 lbs.10.10 - —
l.c.l., works 100 lbs.10.60 - —
gran., fib., dms., c.l., works 100 lbs 10.60 - —
l.c.l., works 100 lbs.11.00 - —
Chromate (see Yellow zinc).
Cyanide, kgs., 1,000-lb. lots or more, works lb. .523 - —
smaller lots, works lb. .543 - —
Dust, pigment, bbls., c.l., works. lb. .13¼- —
l.c.l., works lb. .14¼- —
Fluoride, bbls., works lb. .49 - .50
Hydrosulphite, dms., c.l., frt. alld. lb. .21½- —
l.c.l., frt. alld lb. .22 - .37½
Iodide, NF, jars lb 5.25 - —
Laurate, bbls lb. .45 - .46
Metal, slabs, E. St. Louis lb. .10 - —
Naphthenate, liquid, 8% Zn, dms., frt. alld. lb. .24½- —
10% Zn, dms., frt alld lb. .30 - —
Zinc oleate, fused, bbls. lb. .36 - —
Oxide, pigment, American process, lead-free, bgs., c.l., dlvd lb. .13½- —
l.c.l., dlvd lb. .14½- —
leaded 35%, bgs., c.l., dlvd. lb. .14 - —
l.c.l., dlvd lb. .15 - —
50%, bgs., c.l., dlvd lb. .14½- —
l.c.l., dlvd lb. .15½- —
French process, com'l green seal, bgs., c.l., dlvd lb. .15¼- —
l.c.l., dlvd lb. .16¼- —
red seal, bgs., c.l., dlvd lb .14¾- —
l.c.l., dlvd lb. .15¾- —
white seal, bgs., c.l., dlvd lb. .15¾- —
l.c.l., dlvd lb. .16¾- —
USP, ctns., c.l., dlvd lb. .16¾- —
l.c.l., dlvd lb. .17¾- —

Zinc oxide Pac. coast prices 1c. higher.

Phenolsulphonate, NF, gran., dms. lb. .39 - —
powd., dms. lb. .42 - .49
Resinate precip., dms., frt. alld. lb. .26¾- —
Silicofluoride, bbls., works lb. .12 - .13
Stearate, tech., USP, ctns., c.l. lb. .37 - —
l.c.l. lb. .38 - .42
Sulphate cryst., 22% Zn, bgs., c.l., works frt. alld 100 lbs. 7.40 - —
l.c.l., same basis 100 lbs. 7.90 - 9.90
flake, 25½%, Zn, bgs., c.l., works 100 lbs. 6.55 - —
l.c.l. works 100 lbs 6.90 - —
36% Zn, bgs., c.l., frt. alld. 100 lbs. 7.90 - 8.05
l.c.l., same basis 100 lbs. 8.65 - 8.80

Zinc sulphate in bbls. 40c higher.

USP, gran dms lb. .26 —
Sulphide, pure bgs., c.l., dlvd lb. .2536 —
fluorescent fib., dms., less than 1,000-lb. lots, works lb. 1.10 - 1.90
phosphorescent fib., dms., less than 1,000-lb. lots, works. lb 1.85 2.50
Undecylenate dms lb. 2.25 2.50
Yellow (see Yellow zinc).
Zinc-ammonium chloride bgs., c.l., works 100 lbs. 9.65 - —
bbls., c.l., works 100 lbs.10.25 - —
l.c.l., bbls., works 100 lbs.10.75 - —
Zinc-cadmium sulphide fluorescent fib., dms. less than 1,000-lb. lots, works lb. 2.10 - 2.90
Zinc-calcium resinate, dms., c.l., works lb. .1180- .1360
l.c.l., same basis lb. .1220- .1400
Zinc-formaldehyde sulphoxylate, basic dms. c.l. lb. .25½- —
l.c.l. lb. .26 - .41¼
normal dms. l.c.l. works lb. .52 - —
Zircon (G), granular, bgs., c.l., works. lb. .03½- —
5 tons to c.l., works lb. .03⅝- —
1 ton to 9,999-lb. lots, works. lb. .04 - —
smaller lots, works lb. .06½- —
milled, bgs., c.l., works lb. .04⅛- —
5 tons to c.l., works lb. .04⅝- —
1 ton to 9,999-lb. lots, works. lb. .04⅝- —
500 to 1,999-lb. lots, works. lb. .07½- —

Zircon (G) in barrels, 1c. higher.

Zirconium acetate, 13% sol ZrO_2, c.l., 30,000 lbs. minimum, works lb. .23 - —
Carbonate basic, cake bbls., works lb No prices.
Hydride ens. works lb. 7.25 -11.50
Nitrate, dms. ex whse cc. 4.50 - 7.00
Oxide, 92½%-99%, white, grd., bbls., or bgs., works lb. 1.50 - —
lump, electric-fused, bgs., c.l., works lb. .44 - —
5-ton lots, works lb. .44½- —
1 ton to 9,999-lb. lots, lbs., works lb. .45 - —
C.P., white, grd., bbls., or bgs., works lb. 1.50 - —
lump, electric fused, bags, 500 to 1,999-lb. lots, works lb. .45½- —
smaller lots, works. lb. .48 - —
milled, electric-fused, bgs., c.l., works lb. .59 - —
5-ton lots, works lb. .59½- —
1 ton to 9,999-lb. lots, works lb. .60 - —
500 to 1,999-lb. lots, works lb. .60½- —
smaller lots, works. lb. .63 - —
Oxychloride, cryst., ctns., 5-ton lots, works lb .35½- —

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COMPOUND	CHEMICAL TYPE	MELTING POINT	MOISTURE	WASHED ASH	SOLUBLE ASH	FREE STEARIC ACID	FINENESS	SOLUBILITY	APPLICATIONS
Aluminum Stearate GM	Aluminum	155°C.	<1.0%	10.0%	1.0%	6.0%	95%-200 mesh	B°, MS°, P°	A-1-2-4-5; D-1; G-1
Aluminum Stearate R	Aluminum	145°C.	<1.0%	8.0%	0.6%	10.0%	95%-200 mesh	B°, MS°, P°	A-1-2-3-4-5; B-2; D-1-2 E-2; F-2; H
Aluminum Stearate V	Aluminum	100°C.	<1.0%	6.0%	0.6%	25.0%	98%-200 mesh	B°, MS°, P°	E-2-3; F-1; G-2
Aluminum Stearate XX	Aluminum	115°C.	<1.0%	7.0%	0.5%	15.0%	95%-200 mesh	B°, MS°, P°	F-1
Metasap 537	Aluminum	160°C.	<1.0%	10.0%	1.0%	5.0%	90%-200 mesh	B°, MS°, P°	A-1; E-1
Metasap 569	30% Aluminum Solution	—	—	—	—	—	—	—	A-2; D-2
Metasap 571	Aluminum	100°C.	1.0%	6.0%	1.0%	10.0%	80%-200 mesh	B°, MS°, P°	D-2
Metasap 579	30% Aluminum Solution	—	—	—	—	—	—	—	A-2; D-2; F-2
Metavis 540	Aluminum	—	<1.0%	—	—	—	—	B°, MS°, P°	A-1
Metavis 543	Aluminum	—	<1.0%	—	—	—	—	B°, MS°, P°	A-1
Metasap 598	Aluminum	160°C.	<1.0%	9.8%	1.0%	5.0%	99%-200 mesh	B°, MS°, P°	A-1; E-1
Barium Stearate	Barium	160°C.	0.5%	27.0%	1.0%	—	100%-200 mesh	Insoluble	A-1-3; B-1; C
Calcium Stearate	Calcium	150°C.	2.5%	9.5% ash	—	—	100%-325 mesh	Insoluble	A-3; B-1-2-3; D-1-2; E-2; H
Lead Stearate	Lead	100°C.	2.0%	28.0% (Pb)	—	—	99%-325 mesh	Insoluble	B-1-4; C
Lithium Stearate	Lithium	220°C.	<1.0%	12.5% (Crude)	—	—	95%-325 mesh	B°, MS°, P°	A-1-3; B-1; E-1
Magnesium Stearate	Magnesium	145°C.	2.5%	8.0%	0.6%	—	100%-325 mesh	Insoluble	B-1-3; D-3; H
Zinc Stearate	Zinc	115°C.	<0.5%	15.5%	0.5%	—	100%-325 mesh	Insoluble	A-2; B-1-4; C; E-3; F-1; H
Zinc Stearate USP	Zinc	119°C.	<0.5%	15.0%	0.3%	—	100%-325 mesh	Insoluble	B-1-4; E-3; F-1
Metasap 546	Zinc	118°C.	<0.5%	15.5%	0.3%	—	100%-325 mesh	Insoluble	B-4
Metasap 574-A	Zinc	118°C.	<0.5%	15.5%	0.5%	—	100%-325 mesh	Insoluble	A-2; B-1-4; C; E-3; F-1; H
Metasap 576	Zinc	117°C.	<0.5%	15.5%	0.5%	—	100%-325 mesh	Insoluble	A-2; B-1-4; C; E-3; F-1; H
Aluminum Palmitate	Aluminum	—	—	—	—	—	—	—	A-2-5; D-2; G-1
Zinc Palmitate	Zinc	—	—	—	—	—	—	—	F-1; G-1

Solubility Key: B-Benzol, MS-Mineral Spirits, P-Paraffin Oil, °-Gels.

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(F) for FLATTING: 1. lacquers and varnishes 2. paints
(G) for SUSPENSION of: 1. pigments 2. graphite
(H) as BINDERS in powder metallurgy

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Palm Oil, Kernels Output Reported Higher in Malaya

Malaya's production of palm oil and palm kernels during the first six months of 1953 exceeded production in the comparable months of 1952 by about one-fourth, reports J. R. Johnstone, agricultural officer, American Consulate General, Singapore. Palm kernel exports also increased from the preceding year but palm oil exports declined slightly.

Palm oil production amounted to 26,574 short tons against 21,353 in the first half of 1952. The increase was attributed to an increase in harvested acreage, reflecting the gradual increase in planted acreage, and better collections from acres harvested.

A major policy objective of the Malayan government is crop diversification, and oil palms are considered one of the leading crops in this program. Research has been undertaken on high-yielding varieties, and approved stock is being planted. Thus far oil palms are confined almost exclusively to estate cultivation, and it does not seem likely that smallholders will become a significant factor in the foreseeable future. Palm kernel production amounted to 6,899 tons in the first half of this year compared with 5,553 in the comparable period last year.

Potash Co. Appoints Neeley

Potash Company of America, Carlsbad, N. M., has appointed T. B. Neeley as sales representative for the territory comprised by the states of North Carolina, South Carolina and Virginia. This territory was formerly serviced by Albert Woods, who is now in the company's general sales office in Washington, D. C.

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Chemistry Can Do Much

As this year's chemical industry medalist quite ably pronounced, chemistry can provide an abundance of food, industrial materials, and power—if properly and capably applied. Its application demands a new, high regard for man's social responsibilities. It needs vision and it needs, in greater degree, the full, possible measure of reality essential to its best service for mankind.

There was comment in these columns several weeks ago on the potentialities of applied chemistry in the providing of new and better fuels. It has a bigger, more necessary field of service in the providing of more food—and that also can be new and better. The synthesizing of fats and carbohydrates has got a bit beyond the promising stage. The synthesizing of nutrient proteins appears to be bright in promise. There is also, much to be done in the better utilization of existing nutrients of all three classes, many of them obtainable from new sources—such as can be seen in connection with the expanding processing of various types of marine vegetation.

Applied chemistry, of course, has already done much to increase the productiveness of agriculture in quality, as well as in quantity. Its contributions in that field have been both promotive and protective. It can and will do more in both areas. It can—and doubtless it will—do much in the reclamation of land now largely wasted for various reasons. For one thing, it can do much more than the Congress of the United States to deal adequately with the drought problem.

In that connection, there is a big field for applied chemical service in connection with the still largely politico-economical movement to make seawater available for irrigation by the application of demineralization processes. Applied chemistry has already shown what its participation can do in that field by the progress made in the production of bromine and magnesium from seawater. The possibilities in that direction are almost unlimited—and they could contribute much to the providing of more abundant supplies of natural raw materials.

Applied chemistry can do much to further the application of seawater to irrigation by way of providing lasting coatings for canals, ditches, and tunnels which can do away largely with the use of pipelines.

Yes, applied chemistry can contribute very usefully to the creation and maintenance of a better national economy (in the broadest sense of that term). And it can and will enter upon that service for the people without demanding that government guarantee it 90 percent of parity.

For Industrial Health

It would not, quite obviously, be possible to find sufficient space anywhere to accommodate all who should attend the coming annual meeting of the Industrial Hygiene Foundation of America. It is greatly to be desired that all who can be there do attend. The information which will be provided in the many contributions to the several conferences comprised by the meeting cannot be too widely received, too seriously considered, or too earnestly applied to the problems presented to every managerial body by the medical, engineering, chemical-toxicological, basically legal, medical-legal, and other technical aspects of the broad, multipartite subject known as industrial hygiene.

Some idea of their scope was provided by the proceedings, last week, of the industrial health and safety committee of the National Association of Manufacturers. No one meeting, even that of the foundation, can tell enough; but the IHF conferences scheduled for next week will contribute sufficient to enable management in any area of activity or purpose to understand the needs it faces and to endeavor satisfactorily to meet them.

For that reason it is greatly to be desired that every organized industrial group arrange to have copies of this year's IHF conference proceedings put in the hands of the management of every one of its members, and that it urge upon the recipients a careful consideration of what the information thus conveyed can mean—and what it should mean. It would be very useful also for each organization to arrange a symposium on at least one of the major IHF topics as a part of its next annual meeting, providing a place therein for the participation of every representative of its members who will volunteer, or can be drafted, to take part. Industrial hygiene is something far bigger than having a first-aid cupboard more or less handy in, at least, some areas of everyday operations. It should be better known and better applied.

Human Relations Are Basic

At least at first sight, it may somewhat puzzle the casual reader to get the congruity of the emphasizing of human relations among the agenda of this year's meeting of the Industrial Hygiene Foundation. Popularly, the term, "industrial hygiene," is interpreted and applied largely, if not wholly, in terms of the health of industrial personnel. Its connotations, at least, are very much broader; and should be extended to include the health of industry itself.

Under such an application, it is clear that human relations are of fundamental importance, because the health (welfare, if you will) of industry depends upon—and derives from—the relations within and among the groups of human beings who constitute it—despite the peculiarly differing views of certain schools of economic theory.

Fundamentally, industry is an animate creation. In common with those more easily and more widely recognized as such, its functioning depends upon the proper correlation, coordination, and collaboration of its more or less adequately connected parts. The importance of those parts begins with those which are human. Hence, the relations of humans and humans stand far ahead of the fitness of a man and a machine in the contributing to the success of the functioning in which all have a part.

Unfortunately, in various ways, the importance of human relations in industry has not been adequately recognized. That is the chief reason why, as is recognized in the IHF keynote for its consideration of human relations problems, government has come to have at least a big role in the relationship of employer and employee. The inadequacy of that recognition underlies the discriminatory miscalling of that relationship "labor relations." It is at least implied in the designations of two topics in the IHF conference; one of which has to do with problems of human relations "as they affect" labor; the other is "responsibilities of management." The relations of both groups to those problems are the same; both are affected thereby; both have responsibilities thereunder.

Human relations in industry have a particular importance in what might be called the "metabolic" processes which must be involved in the readjustments that industry is progressively being called upon to make. The changes that are demanded in the providing of the special forms of energy, specially applied, required for the effecting of those readjustments are wholly a matter of human relations, even in their need for mechanistic application.

So, human relations are a most important part of what is needed now—and always—to assure the health and welfare of industry as a calling and, even in such respects as the connections are not directly or largely influential, of all who constitute the fundamental, animate component of industry as a creation.

For the Bookshelf

STEWART'S SCIENTIFIC DICTIONARY. By Jeffrey R. Stewart. Cloth, 788 pages, 6 x 9 in., Alexandria, Va.: Stewart Research Laboratory. $10.50.

This is the fourth edition of what had previously been titled "The National Paint Dictionary," whose third edition was published in 1948. The 1953 volume is an alphabetical compilation of names, trade names and scientific terms used by the paint industry in particular, and other chemical process industries related thereto.

In general, it is a good and useful volume, and the definitions and descriptive material is of such nature that it goes beyond the usual limitations of a dictionary. In the case of those trade names which it lists, the producer is usually identified. Its definitions are concise, yet sufficiently descriptive to convey a real message about the material to those in the industry which would employ it. In this sense the volume is more of an encyclopedia than a dictionary.

Washington Talks

—Continued from page 5

may be common occurrences next year. The most pessimistic report is that it may even be necessary to resort to purification of the sea waters on a major scale to meet requirements in some areas.

This year's drought has been one of the worst in many years, although not so apparent because it has been rather scattered and spotty throughout the year. However, some idea of the seriousness of conditions can be gained from the fact that out of about 3,000,000 counties in the country, more than 400 of them have been certified as emergency dry areas enitled to assistance from the federal government. More would have been certified except for the shortage of funds.

Agriculture Dept. Hitting Surpluses

The Department of Agriculture has adopted a newer and tougher attitude on compliance with its acreage allotment programs that indicates it means business in its hopes of scaling down some of the burdensome farm surpluses next year. The new policy is that if a farmer expects to enjoy the fruits of price support on any one basic crop grown on his farm he has got to stay within the acreage allotments established for all the other basic crops grown on his farm.

The only exception to be made is in the case of wheat. The wheat marketing quotas apply only on farms with more than fifteen acres of wheat. Therefore, a farmer who exceeds his acreage allotment, but does not have more than fifteen acres of wheat on his farm, will still be eligible for price supports on other basic commodities provided he observes the acreage allotments for those on his farm. He will, however, be ineligible for wheat price supports.

Wheat farmers were apprised of this enforcement policy as it applied to them early this month. Now the department has decided to apply the same principle to all other basic commodities—cotton, corn, tobacco, rice and peanuts. Eligibility for available price supports on non-basic feed grain and flaxseed crops will not be affected by non-compliance with basic crop allotments. For example, a producer could be eligible for price support on his flaxseed crop even if he exceeds his wheat allotment.

Tax Reduction Analysis

The tax rate reduction on individual incomes that is to go into effect January 1 isn't going to mean very much for the wage earner in the low income brackets because offsetting the 10 percent reduction in the income tax rate, is the automatic increase of one-half percent that is to take place at the same time in the social security tax.

The income tax reduction means that a married man with two children and a monthly salary of $225 will have a take-home pay increase of 10 cents a month, the amount by which his tax was increased in 1951. If he makes $300 a month, he will get an increase of $1.60. If he makes $375, his increase will be $3 a month.

However, the effect of the two tax changes is in the opposite direction for the tax reductions shown in the examples will be offset by monthly social security increases of $1.12, $1.50 and $1.50 respectively. (The social security tax applies only on the first $3,600). The net result is that the man making $225 a month will have $1.02 less in the monthly pay enevelope, the man making $300 will come out with 10 cents a month more, and the man making $375 will gain $1.50 a month.

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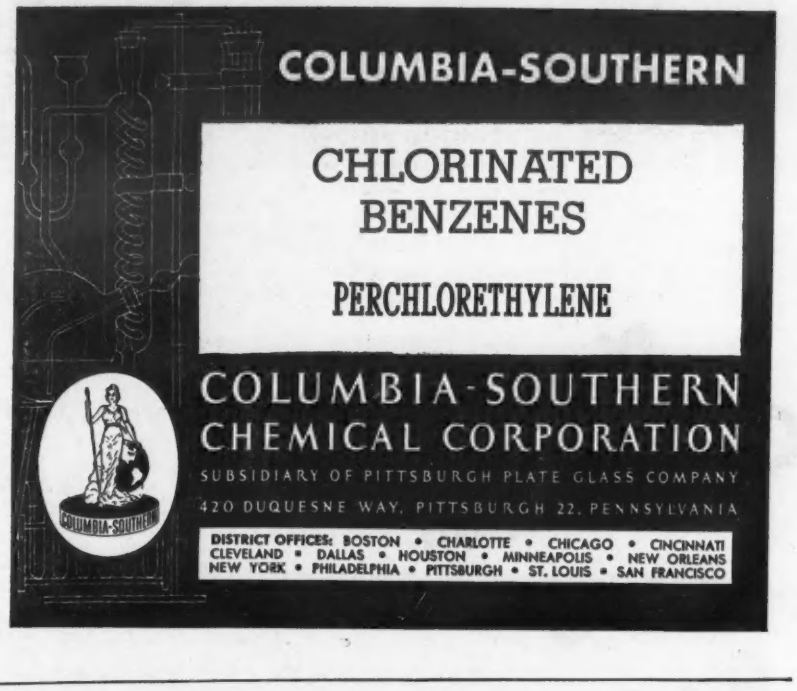
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Heavy Chemicals

Index declined to 98.22 last week from 98.26 in the preceding period. Advances were recorded in most of the tin salts as the basing price of the metal was higher than the previous week. Slight easement in the spot supply of quicksilver and a continued slow demand accounted for the lower market last week. Developments in nickel were being closely followed. The government asserted that the use of the word "decontrol" for nickel was a poor substitute for the actual reality. According to the director of the Office of Defense Mobilization all the government did do was to allow the normal economic laws to function after it had taken the metal "off the top." It was admitted there is certainly not enough nickel to go around. With the military, AEC and the stockpile getting first priority, it will be a long time before there is sufficient nickel for the civilian economy. Cobalt metal was priced higher owing to increased costs of replenishment of stocks from the Belgian Congo.

According to producers, a price advance in cobalt based chemicals is expected shortly in view of the higher metal price. Demand for soda ash and caustic soda remained steady. Chlorine was readily available on spot although some producers stated that the cutback in production of caustic might have a tightening effect on chlorine. Several of the state municipalities are building up stocks of calcium chloride for winter use. Sodium phosphates were active with some producers reporting record sales. Copper sulphate demand from the citrous growers in Florida seemed to have petered out but industrial demand continued strong. Producers of nickel salts are now allocating shipments.

Paper production based on percentage six-day capacity was 96.9 percent for the week ending October 31, according to the American Paper and Pulp Association. This compared with 97.1R in the preceding week and 91.3 in the corresponding week of 1952.

Production figures appearing below, unless otherwise designated, are from the Chemical Division of the Tariff Commission and the Bureau of the Census, Department of Commerce.

Calcium Carbide—August production of commercial was off moderately from the preceding month. The total showed 66,498 tons, compared with 69,603 in July and 45,812 tons during August, 1952.

Calcium Chloride—Sales for winter use have increased while recent rains have dampened the demand for highway dusting. The market has retained a firm tone with stocks adequate to meet requirements so far.

Carbon Tetrachloride—Demand is sustained sufficiently to keep the market in a fair state of activity. Stocks remained adequate to satisfy current needs. August production showed 25,933,506 pounds, compared with 26,042,516 in the preceding month and 14,191,703 pounds in August last year.

Chlorine—Supply for spot shipment continued adequate with demand fair but not urgent. It was stated that paper mills are taking their usual quota but demand from other sources is not exerting too much pressure on production at the present time. It was pointed out that cutback production of caustic soda may have a tendency to tighten chlorine.

Cobalt Chemicals—Acetate and other chemicals based with cobalt are tagged for higher prices in the near future according to producers. The metal has advanced 20c. per pound and is now listed at $2.60.

Copper Sulphate—Market conditions have shown no important change since the turn of the month. Sales to citrus growers in Florida have not been up to seasonal expectations to date. The industrial demand held at a satisfactory level while export sales remained slow. There is no scarcity of stocks and prices are holding firm.

Nickel Sulphate—Producers are now allocating this material along with other nickel salts to platers and other consumers. While the supply is still inadequate to meet requirements, gradual improvement is expected from month to month but it may be six months before the market assumes a normal position. The supply made available for November is the same as that for October, according to producers.

Price Trends

Advanced

Cobalt metal, 20c. per lb.
Potassium stannate, .04c. per lb.
Sodium stannate, .05c. per lb.
Tin chloride, .06c. per lb.
Crystals, .05c. per lb.
Metal, ¼c. per lb.
Sulphate, .06c. per lb.
Tetrachloride, .04c. per lb.

Reduced

Quicksilver, $1 per flask.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
98.22	98.26	98.27	95.13

(For Current Prices see page 9

Potash, Caustic—Sales while fair have not exceeded moderate dimensions. It has been about four months since the heavy buying movement occasioned by the announcement of higher prices subsided, and it is expected that consumer inventories are running rather low. There is no scarcity of stocks at present and immediate shipments have continued available.

Potassium Carbonate—Not unusually active at present. According to trade reports, one of the major outlets for this material is television tubes and the television industry is experiencing a period of over-production. Carbonate producers are looking for new business and are in position to offer immediate or future shipments at current prices.

Potassium Stannate—Priced higher by producers basing the market on 82c. Demand for plating use continued steady with small lot sales predominating. Some shipment was available at 63.5c. to 70c. per pound, freight allowed east.

Soda Ash—Shipments were well maintained over the turn of the month and producers report the demand good. Gains put in most instances has been adjusted to meet demand and while there is no shortage of stocks, producers' inventories have been held within bounds for both light and dense ash.

Soda, Caustic—Like soda ash, output has been adjusted to meet requirements and there seems to be no serious overflow at the present time. In some instances it looked as though production had been cutback a bit too much. It is possible that the lower output of electrolytic may have a tendency to tighten chlorine eventually.

Sodium Cyanide—The Plant Protection Department, Egyptian Ministry of Agriculture, is inviting bids until December 12, 1953, for the supply of 30 seed-cleaning machines and 305 tons of sodium cyanide, 100 tons of copper sulphate, and tons of wettable suphur. Bids must be submitted through an agent established in Egypt to the Egyptian Ministry of Agriculture, Dokki, Cairo, and must be accompanied by a provisional deposit of 2 per cent of the value of the contract. A copy of the specifications and bidding conditions is available for review purposes on loan from the Commercial Intelligence Division, Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C. Requests should identify specifically the material desired. The documents also may be examined at the Bureau of the Egyptian Commercial Counsellor, Egyptian Embassy, 2310 Decatur Place NW., Washington 8, D. C.

Sodium Phosphates—August production of acid pyro was placed at 1,150 tons, compared with 1,104 in July and 894 tons in August last year. The tetra output was 8,691 tons in August, against 5,327 in the preceding month and 6,287 tons in August 1952. Production of tripoly in August showed 40,323 tons, compared with 29,012 in July and 36,582 tons in August 1952.

Sodium Stannate—Priced fractionally higher last week with producers basing the market on 82c. tin. Demand active for current needs with stocks readily available for immediate shipment at 46c. to 51.9c. per pound freight allowed east.

Sodium Sulphide—Production reported about equal to demand at present with heavy inventories in producers' hands. Demand described as fair with prices firm and unchanged.

Tin Chemicals—While tin oxide remained firm and unchanged at 84½c. to 85½c. per pound, the other tin salts were priced slightly higher based on 82c. Demand continued active with consumers adhering to the former pattern of restricting purchases to actual wants. Producers' stocks remained adequate to meet all requirements. The breakdown shows

For Late Market Developments, See Page 4

chloride at 80.5c. to $1,013 per pound, crystals 79c. to 83c., sulphate 86.6c. to 88.6c. and tetrachloride 70.5c. to 71.5c. per pound, all f.o.b. the works.

Acids

Formic—Supply conditions have shown some improvement over a month ago. Demand from textile mills was reported good. Stocks while not excessive are meeting requirements without difficulty. August production was placed at 1,158,922 pounds, compared with 1,382,800 in July and 848,553 pounds during August last year.

Hydrochloric—Demand remained steady with shipments well up to the level established in October. Supply and demand continued about in balance with prices unchanged.

Hydrofluosilicic—Sales mostly of moderate dimensions have kept the market fairly active. Consumers were inclined to limit purchases to actual wants. J

Nitric—Moving steadily for miscellaneous consumer wants. Production sustained at a level to meet requirements promptly.

Oxalic—No unusual activity last week. Small lot sales predominated with supply comfortable and prices firm. August production amounted to 1,942,799 pounds, compared with 2,139,051 in the preceding month and 910,978 pounds in August, 1952.

Phosphoric—Demand good but not overtaxing the comfortable supply position. August production was placed at 209,923 tons including 109,954 tons made from phosphorous and 99,969 from phosphate rock. The July output showed 195,728 tons and, in August, 1952, the total amounted to 179,495 tons.

Sulphuric—Shipments of steady dimensions continued to absorb the major part of current production. The demand was chiefly for immediate and prompt shipments with sales of both large and small lots reported.

Nonferrous Metals

Domestic imports of metals and manufactures, except machinery and vehicles, declined from $201.7 millon in July to $189.1 million in August, the Bureau of the Census, U. S. Department of Commerce, reports. The decline resulted from decreases in imports of copper, manganese, and zinc.

Aluminum—In reviewing the supply situation, the Aluminum Association states that some easement was noted during the third quarter. With more new facilities coming into production, the industry continued to set new monthly production records. How much additional metal will be available for civilian uses remains in doubt, however, since the tonnage to be taken for stockpiling in the fourth quarter will be substantially greater than in the preceding quarter and some losses are expected in pig production due to low water conditions. Allotments of aluminum to defense producers will be reduced in the fourth quarter. Defense requirements are now being determined more precisely and under the present system of partial controls some contractors are getting an adequate supply of metal without assistance. Further action on the third round of aluminum capacity expansion has been delayed pending completion of a study of military force goals by the new Joint Chiefs of Staff. In the meantime, one prospective new producer who has been granted certificates of necessity announces that plans for financing its entry into the industry are nearly complete.

Despite opposition of aluminum smelters, which in most areas are not operating at full capacity, plans are proceeding for installation of sweating furnaces for processing aluminum scrap at two Air Force bases—McClellan near Sacramento, and Tinker Field near Oklahoma City.

Aluminum Scrap—Purchased and toll-treated aluminum-base scrap consumed in June totaled 37,271 short tons, an increase of 1,042 tons compared with May, according to the Bureau of Mines. Of the total, which included 307 tons of imports classified as clean and contaminated scrap, secondary smelters used 24,739 tons, primary producers 9,755 tons and others, chiefly foundries, 2,777 tons. In addition, a total of 873 tons of imported "remelt" or "scrap pig" was used in June. Recovery (calculated) from new scrap was 25,791 tons and from old scrap 6,699 tons (includes 291 tons recovered from imported scrap). Alloying smelters reported 117 tons of aluminum recovered from aluminum-base scrap in the production of bronze and bronze-hardeners, magnesium and zinc-base alloys. Secondary aluminum-base ingot production by independent smelters in June was 22,741 short tons, a slight increase of 172 tons compared with 22,569 tons produced in May. Only minor price changes for secondary ingot occurred in June.

Cobalt—Prices of the metal have been advanced 20c. per pound establishing the market at $2.60. Higher producing costs following increased production in the Belgian Congo were the principal factors in bringing about the upward revision in the market.

Copper—Demand fairly active last week for November shipment. According to trade reports, around 40,000 tons have been booked to date for delivery this month. No official news was announced regarding the U.S.-Chile copper agreement although the outcome is expected to be known shortly. At the close of the week, electrolytic was priced at 29½c. to 30c. per pound delivered Valley basis.

Lead—Sales of fairly substantial quantities were sold for domestic and export use last week and the market appeared firm regardless of London cables quoting fractionally lower prices. Interest was focussed on the hearings going on in Washington in which industry officials claim the urgent need for increased tariff protection. The market closed last week at 13.50c. per pound for the common grade, New York basis and at 13.30c. per pound St. Louis.

Magnesium—Production of primary magnesium during the third quarter period of 1953 was 18,550 tons, according

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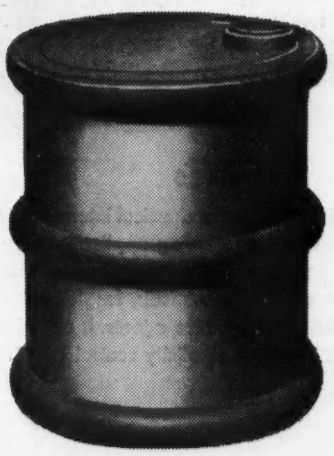

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to the Bureau of Mines. This was 7,600 tons lower than the production in the second quarterly period of 1953. Production during the third quarter of 1953 exceeded shipments by 1,805 tons, leaving producers' stocks at 4,307 tons at the end of September. The base price of primary ingot which was increased on March 9 from 24.5c. to 27c. per pound, remained at 27c. per pound during the third quarterly period. Production of mangesium during the third quarter of 1953 came from Dow Chemical Co.'s plant at Freeport, Texas, and the Government-owned plant at Velasco, Texas, which is scheduled to be operated by Dow Chemical Co. for the Government until June 30, 1954.

Quicksilver—There were sellers at $183 per flask on spot last week while the range extended upward to $185 depending upon seller and quantity. Demand continued slow with slight easement noted in the supply position.

Selenium—Export quotas for the fourth quarter of this year and the first quarter of 1954 have been set at 6,000 pounds, selenium content. The amount is the same as the second and third quarters of this year.

Tin—Buying interest was somewhat improved last week with demand sufficient to narrow fluctuations in the open market. Individual purchases were confined to current wants but the aggregate was of better volume. Sales of Straits tin on spot in the late trading were reported at 82¼c. per pound.

World mine production of tin-in-concentrates during August declined to 13,500 tons from 16,100 tons in the previous month, according to the Oct. issue of the Tin Study Group Statistical Bulletin. This reduction was mainly due to a drop in Bolivian exports, from 4,082 tons in July to 2,407 tons in August. Malayan and Indonesian production was also lower in August at 4,506 tons and 2,945 tons respectively. During September, Malaya produced 4,669 tons, Indonesia 2,943 tons, the Belgian Congo 1,716 tons and Thailand 858 tons. World tin metal production was 15,000 tons in August against 15,900 tons in July. World consumption of tin is estimated at 10,800 tons in August as compared with 11,100 tons in July. The editors of the Bulletin have estimated the U. S. consumption for the last two months at 5,000 tons each.

Zinc—The American Zinc Institute states in part that zinc supplies will continue to be sufficient to meet both near and long-range requirements—1953 production of slab zinc at U. S. smelters is ahead of the previous year. If maintained, this year's output will not be far from the record established in the war year of 1943. Imports of slab zinc in the first six months of 1953 were 154,000 tons in comparison with 37,000 tons in the same period of last year, and almost equal to the all-time annual high of 156,000 tons. It is important to note that zinc production throughout the world is steadily increasing—production, exclusive of countries behind the Iron Curtain, has risen from 1,420,000 tons in 1946 to 2,166,000 tons in 1952—an increase of exactly 50 percent in annual supply available to the free world. There are ample stocks of all grades of slab zinc now on hand—stocks held at smelters on September 30, 1953, were 141,000 tons, the highest in many years. Zinc mine reserves are substantial—it is generally conceded that mine reserves—measured, indicated and inferred—are larger than any published figures. In any case, it is certain that reports of imminent exhaustion of zinc were ill-founded and that there is every evidence of adequate reserves in the United States and abroad to match any reasonable estimate of requirements for many years to come.

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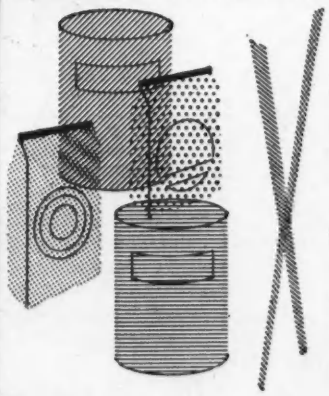

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'Acrilan' Fiber Improvement Is Reported by Chemstrand

Development of an improved "Acrilan" acrylic fiber on the research laboratory, with findings confirmed on pilot plant and production equipment, has been announced by Osborne Bezanson, president of Chemstrand Corporation, Decatur, Ala.

The fiber has undergone satisfactory initial evaluation on full-scale mill equipment in the textile research department of American Viscose Corporation, which has conducted this work on contract, it was reported. The textile research department has converted the fiber into fabrics of various blends and constructions and the fabrics are currently undergoing wear tests. The next step, Mr. Bezanson said, is to produce the fiber in quantities sufficient for mill evaluation and test programs.

Solvay Process Publishes Booklet On Careers in Chemical Industry

Solvay Process Division of Allied Chemical & Dye Corporation, New York, has published a twenty-six page recruiting booklet, entitled "Your Career in the Chemical Industry." The booklet discusses opportunities in the chemical industry and includes a history of Solvay and a description of its products. Particular reference is made to employment opportunities with Solvay, including its research, engineering, production, sales, technical service and product development departments.

BDSA Announces Revocation Of Anti-Hoarding Regulation

Revocation of a regulatory measure titled "Designation of Scarce Materials 1" was announced last week by the Business and Defense Services Administration. The measure was issued by the National Production Authority, predecessor agency to BDSA, to carry out the anti-hoarding provisions of the defense production act.

The document specified as scarce the strategic alloying materials chromium, cobalt, columbium and tantalum, molybdenum, and nickel, and also diamond grinding wheels. Since government controls over the use, allocation and inventory of these items have been revoked, except for regulations which assure delivery of military and atomic energy orders, BDSA officials said continuation of this designation no longer is warranted.

Stewart Associates Formed

F. S. Stewart Associates, chemical engineers, has been formed with laboratory and offices at 10819 Venice boulevard, Los Angeles. The organization's services are available in chemical research, engineering and organic materials.

American Cyanamid Constructing New Office-Laboratory in Georgia

R. C. Ruffer, manager of American Cyanamid Company's plant at Valdosta, Ga., has announced that construction has begun on a new office-laboratory building. The new building, he said, is part of a general modernization and expansion program. It will be a one-story structure, and is expected to be completed in about three months. The laboratory will contain new facilities for research on rosin sizes.

Victor Issues Products List

Victor Chemical Works, Chicago, has issued a new catalog containing descriptions and information on uses of many of its chemicals. Also listed are the addresses of the company's various offices and plants.

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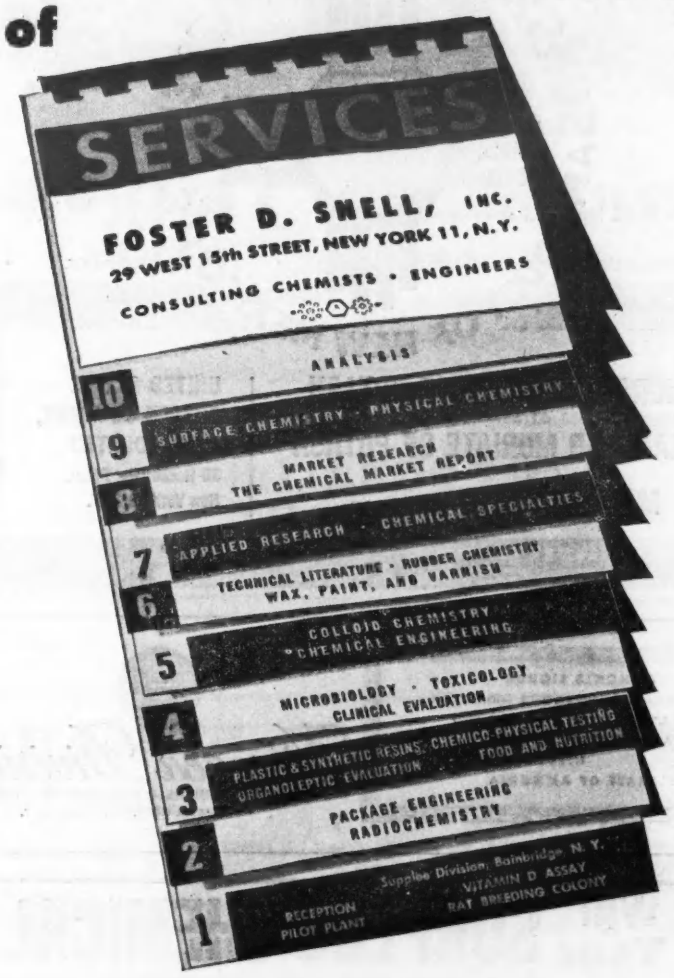
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Agricultural Chemicals

Index declined last week to 111.33 from 111.50 in the preceding period. The markets recorded both advances and declines but the weight was on the down side. Castor pomace touched a new low for the year and the lowest price since September, 1949. Increased production resulting from freer supplies and lower prices for castor beans were primarily the cause of the downward revision. While some producers of DDT are still withholding quotations, those in a position to sell have advanced prices in order to cover higher manufacturing costs. Most of the price advances for DDT were recorded in the previous week although one major producer did not make the revision until last Monday. Dried blood sold at higher prices both here and in Chicago. Limited offerings and scattered improvement for stockfeed use accounted for the advance.

No important improvement in demand for the basic fertilizer chemicals could be noted at the turn of the month. Producers discerned a slight increase in domestic contract shipments of potassium muriate but admitted the current movement was considerably below seasonal expectations. Ammonium sulphate continued to pile up and there was no urgency in the call for normal superphosphate. It was stated that recent rains came too late to encourage much fall planting. Farmers are not taking on mixed fertilizer freely and mixers cannot move finished material at a rate considered normal for this period of the year.

Production figures appearing below, unless otherwise designated, are from the Chemical Division of the Tariff Commission.

Price Trends

Advanced

DDT powder, 5c. per lb.
Dried blood, 25c. per unit of ammonia.

Reduced

Castor pomace, $2.50 per ton.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
111.33	111.50	111.48	113.53

(*For Current Prices see page 9*)

Fertilizer Materials

Ammonium Sulphate—Stocks have continued to increase, with no important improvement in demand. The government has asked for bids on 140,000 tons for shipment to Korea, November-March shipment, bids to be opened November 16. Some trade authorities look for sharp competition from foreign supply sources.

Bone Meal — No increase in activity could be noted last week, and there appeared to be relatively little interest shown for fertilizer or stockfeed use. Producers named $55 per ton for bags, carlots, works, for the steamed grade.

Castor Pomace—Prices touched a new low level for the year last week when sales were made at $25 per ton in bags, carlots, works. Castor bean prices have been lowered recently and reports indicate a large crop. Meanwhile, demand for pomace has not attracted unusual attention for fertilizer use.

Cottonseed Hull Ash—Did not command much attention from tobacco planters this season and it was stated that other forms of potash have proved more economical. The market was quoted nominal at $1.25 per unit of potash delivered.

Dried Blood — The advance continued last week both here and in the Midwest. Limited offerings and a slight increase in stockfeed demand were the primary factors contributing to the upward revision. Sales in New York were reported at $6.75 per unit and at the same figure in Chicago.

Fish Meal—The August production of fish meal and scrap by firms which normally account for about 90 percent of the total output amounted to 39,105 tons compared with 37,002 tons during the same period in 1952. This represented an increase of 2,103 tons or 6 percent compared with August of the previous year, the Department of the Interior states. Output of menhaden meal and scrap for August was placed at 32,880 tons, compared with 29,783 for the same month in 1952. Production for eight months ending August 31 totaled 112,347 tons, against 102,086 for the corresponding period last year. Imports of fish meal for feed and fertilizer during July, 1953, amounted to 10,677 tons compared with 9,753 tons for the same month in 1952.

Hoof Meal — Demand continued slow, with only occasional sales reported at $6 per unit of ammonia, Chicago basis.

Phosphate Rock—Demand described as fair for domestic use with prices holding steady. The supply position has continued comfortable. No new important export sales were reported, although shipments against current contracts remained good.

Potassium Muriate—Possibly a slight increase in shipments against contracts for domestic use but no important gain last week. It is hoped that recent rains might stimulate fall planting although it was admitted that the precipitation came too late to do much good. Mixers are still endeavoring to move their heavy stocks of finished fertilizer.

Sodium Nitrate—No unusual activity at present and movement is mostly of a routine character. Stocks are adequate, with farmers showing no desire to discount future needs. Prices were unchanged.

Superphosphate — Probably moving a little better than some of the other basic fertilizer chemicals but not up to seasonal expectations. Mixers are cautious about taking on stocks of normal until there is a better movement of finished fertilizer to farms. Meanwhile, the available supply continues adequate to meet demand.

Tankage—Sales were spotty, with the aggregate relatively small for the week. Prices remained about steady, with New York naming $6 per unit of ammonia and Chicago $6.75.

Los Angeles Market

Los Angeles.—The volume of trading has continued to increase on the local market. Shipments of material diverted from the Southwest drought areas have eased local delivery problems somewhat without affecting present price structures. Demand has been reported good for 16/20 grade ammonium phosphate and ammonium nitrate. Blood meal and tankage have witnessed only moderate inquiry in the face of heavy production; blood meal remained firm with tankage softer than the previous report. Good progress was reported for the Canadian herring season at British Columbia with introduction of meal at $2.30 per unit of protein into Southern California, equivalent to $1.90 per unit, f.o.b. Vancouver. Domestic meal unchanged at $2.25 per unit, f.o.b. San Pedro, with offerings limited.

Ruling prices were:—Ammonium nitrate—$88.30 per ton, domestic, f.o.b. Los Angeles. $89.84 per ton, Canadian material, f.o.b. Los Angeles.

Ammonium phosphate—$80.14 per ton in bags, 16/20 grade, f.o.b. Los Angeles. $107.64 per ton in bags, 11/48 grade, f.o.b. Los Angeles. Both Canadian material.

Ammonium sulphate—$55.37 per ton in bags, domestic, f.o.b. Los Angeles. $3 less in bulk. Canadian material same.

Blood meal—$5-$5.25 per unit of ammonia at source. Bone meal—$64-$70 per ton, imported, 1/65 meal, c.i.f., Los Angeles Harbor. Domestic—$90-$92 per ton, f.o.b. Los Angeles.

Calcium nitrate—$48 per ton, 15½ percent nitrogen, c.i.f., Los Angeles Harbor.

Fish meals—$2.25 per unit, tuna, f.o.b. San Pedro, bagged; $1.90 per unit, Canadian herring, in bags, f.o.b. Vancouver; $2.30 per unit delivered Southern California points.

Pesticides

As a result of a major producer advancing prices in line with others last Monday, the DDT market is now established industry-wide at a higher selling basis for domestic use. It was stated that the advance was made to cover the increased cost of production and allow at least a small scale profit. The new schedule shows powder in multiwall paper bags at 27c. in carlots, 200-pound fiber drums 28c. per pound in carlots. The l.c.l. price is 2c. above the carlot figure. Flaked is quoted at 26¼c. per pound in paper bags, carlots, and 27¼c. in fiber drums, while the l.c.l. prices are 28¼c. for bags and 29¼c. per pound for drums. All prices are f.o.b. the works, with freight allowed to common carrier destination.

In order to prevent confusion of prices for small and large lot buyers of 20 to one pyrethrum, the current schedule shows one to four drums $9.40 a gallon, 25 drums $9.30 and 50 drum lots $9.20 per gallon, all f.o.b. the works.

2,4-D—Production during August was placed at 972,894 pounds, compared with 1,440,373 in July. Output of acid esters and salts showed 794,240 pounds in August, against 1,512,635 in the preceding month. Production of acid equivalent of 2, 4-D acid esters and salts amounted to 1,185,047 pounds in August, compared with 620,152 in July.

2,4,5-T—August production totaled 471,769 pounds, compared with 488,035 in July and 315,898 pounds during August, 1952.

For Late Market Developments, See Page 4

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Dow High Speed Magnesium Rolling Mill Starts Operation

Dow Chemical Company's Madison, Ill., division has put into operation the first high speed, high production rolling mill for magnesium. The eighty-four inch reversing breakdown coil mill is the largest rolling mill ever constructed for magnesium, it was said. Hot rolled plate, six feet wide and in lengths up to sixty feet, is being produced from 2,000 pound rolling ingots on the new mill. Previous production had been on hand mills utilizing rolling ingots weighing up to 350 pounds. Full operation of the mill is expected early in 1954.

McLaughlin Names Muirhead

McLaughlin Gormley King Company, Minneapolis, Minn., has appointed Robert J. Muirhead representative in the Chicago area. Mr. Muirhead, who was with the sales division of Commercial Solvents Corporation for a number of years in New York and Chicago, replaces Joseph E. Lee, recently made sales manager of the Minneapolis firm's chemical division. (OPD, 10/12/53).

Bemis Buys Flexible Package Co.

All outstanding stock of the Flexible Package Company, Chicago, has been purchased by Bemis Bro. Bag Company, St. Louis, Mo. Present plans are to operate the Flexible Package Company under the same name, and under the same managerial and operational personnel, as a wholly-owned subsidiary. The Chicago company makes polyethylene bags of all kinds and sizes, including liners.

Trade Briefs

The Package Designers Council has awarded first prize in its 1953 "new package for a new product" competition to "Folium" water-soluble fertilizer, made by Monsanto Chemical Company.

Joseph P. Berndt, jr., a member of Monsanto Chemical Company's general engineering department, has been transferred to the company's phosphate division development department.

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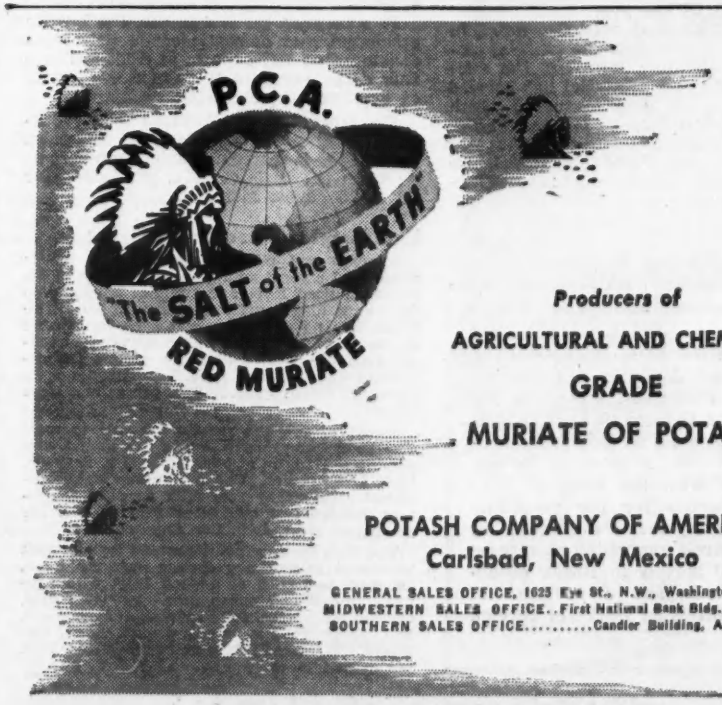

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Petroleum Derivatives

The only activity pricewise in this market was another fractional decline in natural gasoline, 26 to 70 octane, for group three areas. Ample supplies and a slow demand picture held liquefied petroleum gases in a relatively uncertain position. Spot prices were still under contract schedules. A cold weather snap could reverse the trend.

Aromatics have become somewhat more available, sources reported. The present situation was felt likely to hold for the rest of the year. Aliphatic demand has held even. Business was neither up nor down. There has been less pressure in the markets for toluol and xylol since the government need for avgas eased up in this last quarter. The letup in toluol has allowed more distillation time for xylol where producers facilities were flexible. Stoddard solvent was moving at the same pace. Buying interest was moderate. Mineral spirits held to a steady level. Demand was slightly better than summer levels, but no real buildup for the fall paint season has taken place.

Activity for the waxes has not significantly changed. A good demand was sustained for microcrystalline waxes. Supplies were adequate to handle the volume of orders. Fully refined grades of paraffin waxes were doing well. Supplies were improved over the tight conditions existing during the summer. Consumers were currently meeting requirements. Crude scales were still a bit short of overall demand. Cutbacks in lubricating oil production have contributed to the inadequate supply picture here. Further, a steady demand for refined grades quickly took all of the available crude scales off the market. If producers did not handle refined grades themselves, they could readily move their crude scales to refiners.

Solvents and Diluents

Mineral Spirits—The fact that there has not been a substantial expansion of demand in this market was somewhat disappointing to producers. Buying for the fall paint season picked up slightly, but not as much as earlier estimates had led suppliers to look for. Current consumer purchases were steady, but on the basis of needs. There did not seem to be any anticipation of a buildup of a big season on the part of consumers. Supplies were sufficient to take care of present requirements. Prices were firm at previous listings.

Stoddard Solvent—A source reported that all of the aliphatics were going along at approximately the same pace. Demand has not shown any particular tendency towards an increase or a decrease in buying interest. Prices were stable at old schedules. Supplies were sufficient to handle the needs of consumers.

Toluol—Producers report that aromatics have become somewhat more available in the past month. Defense requirements of toluol for aviation gasoline have temporarily eased off. It was felt that the current situation would remain unchanged until the end of the year.

Xylol—Less pressure was also noted in this market. It was said the general easing of aromatics has improved the supply picture of xylol. Material has become more available for those concerns which have enough flexibility to take advantage of current market conditions, it was added. The easing of the tight toluol supply has allowed some additional distillation time for xylol.

Waxes

Microcrystalline—A very good demand for these waxes has been sustained. Business activity, both foreign and domestic, has held up well. Supplies were sufficient to handle consumer requirements. It was said that consumer education, pointing up the advantages of microcrystalline waxes have expanded the potential of the market. Price schedules remained steady.

Paraffin—A strong demand for fully refined grades was still a part of this market picture. Supplies were said to be in better condition than they had been earlier. The tight supplies of the late summer months have softened up and producers were currently meeting requirements.

The short supply of crude scale waxes has not changed too much. Reduced production of lubricating oils was partially to blame for the tight supply, while a good demand for refined grades supported a sustained need for crude scale. Prices were firm and unchanged.

Price Trends

Advanced
None

Reduced
Gasoline, natural, group 3, 26-70 oct., ¾c. per gal.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
105.38	105.38	105.37	104.13

(For Current Prices see page 9)

Lighter Fractions

LPG's—The largest factor in this market continued to be the warm weather which has held consumption levels back. Underground storage facilities were well stocked with propane and surplus supplies have brought spot quotations of 3½c. per gallon or less. Contract schedules remained at 4c. per gallon.

It was felt that some cold weather would quickly take up the surplus spot material. Further, accounts which normally limit their buying to the winter months will have an easier time obtaining supplies with the ample propane supply existing now. It was said that such "standby" accounts frequently find the material hard to get, when the overall picture is not as good. The markets for butane and butane-propane mix were unchanged and in similar circumstances as propane, although not as extreme.

Miscellaneous

Crude Oil—Next month's daily output of crude allowable was cut by the Texas Railroad Commission recently. A seventeen day limitation on production would be in effect in conjunction with the 2,803,528 barrel daily average output permitted. The daily average was cut by 140,531 barrels, making it the third consecutive reduction.

Production of crude petroleum declined 20,000 barrels daily in the month of August, according to the Bureau of Mines. The daily average for Texas fell off 24,000 barrels and the California drop was 7,000 barrels.

In a forecast for November, the bureau estimated that domestic crude petroleum consumption and exports at 6,550,000 barrels daily, equal to the October forecast of 6,550,000 barrels daily.

Gasoline, Natural—Another price reduction in group 3 areas brought schedules down ¾c. last week. Current quotations were on the basis of 5½c. per gallon for 26 to 70 octane material.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended October 24 totaled 286,917,000 barrels, according to data reported to the Bureau of Mines. Compared with the total of 287,831,000 barrels for the preceding week, this represents a decrease of 914,000 barrels comprising a decrease of 554,000 barrels in stocks of domestic crude and a decrease of 360,000 barrels in stocks of foreign crude.

Los Angeles Petroleum Market

Solvents and diluents continued to follow a seasonal pattern with demand reported holding at a good level and supplies adequate to take care of present requirements. Pricewise there was no change or was such anticipated in the near future. Cleaning solvents, including Stoddard, quoted 17.3c. per gallon, 400 gallons or over, ex-tax, f.o.b. Los Angeles area. Lacquer diluent quoted 18.3c. per gallon, same basis.

Stocks of propane remained ample to meet the present and moderate rate of demand with posting unchanged at 5.9c. per gallon, tankcars, f.o.b. Los Angeles. Call for butane was maintained at a steady rate with supplies continuing limited and quotations firm at 6.4c. per gallon, tankcars, f.o.b. Los Angeles.

The high melting point paraffin wax market witnessed little if any change over the week. Demand continued at a good level with supplies limited and prices firm. 140/147 ASTM, carload loose slabs, fully refined, f.o.b. refinery, San Francisco Bay area, quoted .0805c. per pound; 157/162 ASTM, same basis, quoted .088c. per pound.

For Late Market Developments, See Page 4

Agriculture Dept. Shift Goes Into Effect

—Continued from page 3

their dealings with the department on research in the future, relates to research on forest diseases and pests. Whereas this has always constituted a major function of the Bureau of Entomology in the past, all of this work is now transferred to the Forestry Service and will come out of the budget of that agency. The department's expenditures on this phase of forestry research has amounted to about 40 percent of the budget of the Bureau of Entomology, or about $6,000,000 a year.

Crops Research Sub-Units

Under the crops research unit of the Agricultural Research Service, there will be three sub-units as follows:—

1. Field crops, which include the present field crops group of the Bureau of Plant Industry, Soils and Agricultural Engineering, and certain grass and range management research which is being transferred from the Forest Service.

2. Horticultural crops, which include the present horticultural crops group, except for forest diseases, which is transferred to the Forest Service, and transportation, storage and handling of fruits and vegetables, which is transferred to the Agricultural Marketing Service.

3. Entomology research, which includes the present research work of the Bureau of Entomology and Plant Quarantine other than forest insects, which is transferred to Forest Service, and certain research activities which are transferred to the Agricultural Marketing Service.

Farm, Land Management Sub-Units

Under the farm and land management unit will be the following sub-units:—

1. Soil and water conservation research, including the present soil group of the Bureau of Plant Industry, Soils and Agricultural Engineering.

2. Agricultural engineering research, which is the present agricultural engineering group of the Bureau of Plant Industry, Soils and Agricultural Engineering, with the exception of certain processing work which may be transferred to the utilization research group and certain marketing work which is transferred to the Agricultural Marketing Service.

3. Production economics research, which consists of work in this area now being conducted by the Bureau of Agricultural Economics, has been abolished.

Livestock Research Sub-Units

The livestock research group includes the following sub-units:—

a. Animal disease and parasite research, consisting of present units in the Bureau of Animal Industry.

b. Dairy husbandry research, which will be the present Bureau of Dairy Industry, with the exception of dairy products research and processed butter inspection, the disposition of which is noted below.

c. Animal husbandry research, which will be the animal husbandry division of the Bureau of Animal Industry, with the exception of certain meats research, which is being considered for transfer to the utilization research unit.

The utilization research group will have five sub-groups, four of these to be the present regional research laboratories and associated work of the Bureau of Agricultural and Industrial Chemistry. The fifth, the Washington utilization research subgroup, will include the dairy products research to be transferred from the Bureau of Dairy Industry, certain meats research from the Bureau of Animal Industry, and such other work in the Bureau of Plant Industry, Soils and Agricultural Engineering, which may be classified as utilization research.

Crop Control Sub-Groups

The crop control and regulatory programs will have tow sub-groups as follows:—

a. Insect and plant disease control, which will include the present control work in these areas now being conducted by the Bureau of Entomology and Plant Quarantine, with the exception of forest pest control and blister rust control, which are being considered for transfer to the Forest Service.

b. Insect and plant disease regulatory and quarantine programs, which will include the present work of the Bureau of Entomology and Plant Quarantine in these fields and also probably the enforcement of the insecticide act, which is being considered for transfer from the Production and Marketing Administration.

The livestock control and regulatory programs unit will have three sub-units:—

a. Animal disease control, consisting of the present animal disease control work of the Bureau of Animal Industry.

b. Animal regulatory and quarantine programs, which will include the present activities of the Bureau of Animal Industry in this field.

c. Meat inspection, including the present meat inspection division of the Bureau of Animal Industry, the processed butter inspection work of the Bureau of Dairy Industry, and probably the poultry meat inspection work now being conducted in the Production and Marketing Administration.

Dr. Salter Transferred

Secretary Benson announced November 2 that he had acceded to the request of Dr. Robert M. Salter to be transferred, for reasons of health, from the position of chief of the Soil Conservation Service to be in charge of soil and water conservation research in the Agricultural Research Service.

At the same time he appointed Donald A. Williams as acting administrator of the Soil Conservation Service. Mr. Williams had been acting in charge of the Agricultural Conservation Program since February and before that was assistant chief of the Soil Conservation Service. He has been succeeded by Fred G. Ritchie, former deputy chief of ACP.

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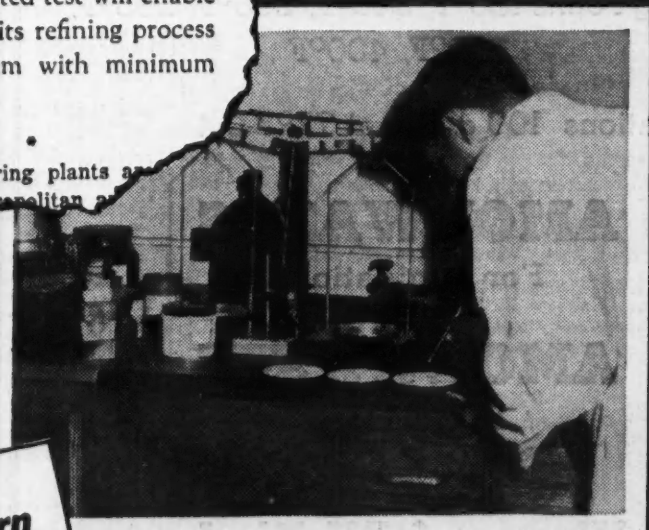

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—Continued from page 5

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Wax, Oil Recovery Paper

J. Pominski, P. H. Eaves, H. L. E. Vix and E. A. Gastrock, of the Southern Regional Research Laboratory, presented a paper on "Simultaneous Recovery of Wax and Oil From Rice Bran by Filtration-Extraction." Two different methods of recovery were outlined. It was pointed out that, based on the small scale experimental yield data obtained, approximately 0.25 percent by weight of the original rice bran, a 100-ton-a-day solvent extraction plant could produce 500 pounds of wax a day, equivalent to a gross return of $93,750 to $125,000 for a 250-day year based upon a price range of from 75 cents to $1 a pound for wax.

There are several fields which offer some promise for relieving dependence on exports, Waldo C. Ault, of the Eastern Regional Research Laboratory, pointed out in a paper entitled, "The Role of Chemical Derivatives in Seeking New Markets for Fats." Two of the fields, Mr. Ault said, are the use of fats as high energy additives to certain animal feeds and their use as raw materials for domestic industrial products. Fats are a relatively promising raw material for consideration by industrial research workers and are available in sufficient quantities to serve as raw materials for chemical derivatives having extensive markets. Moreover, the speaker said, they are available at prices comparable with those of other organic raw materials.

Animal Fats Stabilization Discussed

A paper on "The Stabilization of Animal Fats With Antioxidants During Rendering" was presented by L. R. Dugan, jr., Lotta Marx, Paul Ostby and O. H. M. Wilder, of the American Meat Institute Foundation. They said studies had been made in the rendering of various sources of animal fats by dry-rendering methods. These include pilot-plant scale rendering of offal and fat-back and commercial rendering of aggregates of butcher shop scrap, restaurant waste and dead animals.

Antioxidants were added on the basis of the estimated fat content of the charge. Addition of butylhydroxyanisole or a combination of butylhydrocyanisole, propyl gallate, and citric acid during dry rendering of hog entrails on a pilot plant scale markedly increased the stability both of the rendered fat and pressed cake residue. In the commercial rendering operations fats were produced with a stability of thirty-five to fifty hours without antioxidant and up to 200 hours AOM stability with 0.01 perrcent butylhydroxyanisole present. The stability of the press cake residues was enhanced variously, the paper said.

One lot of partially decomposed hog entrails was rendered. The fat from this charge had a stability greater than 310 hours. Studies were made to evaluate the effectiveness of citric acid with butylhydroxyanisole and 2,6-di-tert-butyl paracresol and of combinations of butylhydroxyanisole with 2,6-di-tert-butyl paracresol, the paper said.

"The Value of Fats as Feedstuffs" was discussed by E. E. Rice, of Swift & Co. Mr. Rice said lack of familiarity with fats as feedstuffs and the need for slightly revised manufacturing technics for the incorporation of fats in feeds have delayed acceptance of fats by the feed industry. More and more, feed manufacturers are experimenting with fats and are preparing to use feeds with fats if cost factors are favorable, Mr. Rice said.

Alcohol Process Described

Those alcohols used in detergents, synthetic lubricating oils, and lubricant additives can now be produced commercially by a versatile process based on the use of sodium metal, Glenn R. Wilson and Ross D. Stevenson of Ethyl Corporation Research Laboratories, Detroit, Mich., told the society.

Unlike most other methods currently in use, chemical reduction with sodium can produce higher alcohols from a wide range of raw materials including fatty compounds from animal or vegetable sources, Dr. Wilson said. Moreover, the process yields a greater variety of product alcohols than do most other methods, because the sodium reduction preserves the chemical characteristics present in the raw materials employed. Added advantages of the process are that it does not require expensive, high-pressure equipment or costly catalysts, they pointed out.

Enjay Plans Regional Office

Enjay Company, Inc., will open a new regional office in Tulsa, Okla. The office will be in the Wright Building Annex and will be opened January 1, 1954. Hector C. Evans will be in charge as manager and Joseph E. McGinniss will be technical representative for the southwest region.

Trade Briefs

Peruvian Pacific Petroleum Company has acquired approximately 300,000 acres of exploration and exploitation lands in Northern Peru.

Sun Oil Company, Philadelphia, has named W. M. Paggi to the newly-created post of assistant superintendent of the Houston, Tex., district.

Arthur P. Allison, district geologist in Shreveport, La., for Sun Oil Company, has retired after twenty-three years of service.

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Textile and Leather Chemicals

Trading in textile and leather chemicals was spotty last week. Consumers absorbed fair sized lots for prompt delivery but showed little interest in later requirements. The tight supply situation in Maine potato starch improved somewhat and shipments were freer and available at a fractional price reduction. Buying interest in starch was still limited at the lower price as consumers anticipated further improvement in the supply situation during the next month. Flake egg albumen was reduced ten cents per pound, while yolk was advanced five cents per pound, in some quarters.

Demand for other sizing materials also was moderate, chiefly for quick deliveries. Tapioca flour was in fair request for spot delivery. Corn starch continued to move in good volume against orders, while sago flour was in light demand for immediate needs.

Exporters may ship cattle hides and skins to most countries without applying for an individual export license, effective immediately the Department of Commerce, announced October 30. The relaxation, which applies to wet cattle hides, wet calf skins, wet kip skins and cattle hide parts, was made possible by the recent large increase in U. S. slaughter of beef cattle and calves and the availability of hides from other sources. Individual export licenses will continue to be required for shipments to Hong Kong, Macao, and Soviet bloc countries, and no exports are permitted to China or North Korea. Shipments to other countries may be made under general license GRO, without prior application to BFC. Export of other hides and skins under general license GRO was permitted previously.

Shipments of rayon to domestic users by producers during September declined to 86,200,000 pounds, and were 10 percent below August and 20 percent below, September last year. Producers stocks on hand at the end of September totaled 106,200,000 pounds, 4 percent more than in August and 51 percent above September, 1952.

Price Trends

Advanced

Tallow, sulphonated, ¼c. per lb.

Reduced

Egg albumen, flake, 10c. per lb.
Potato starch, Maine, ¼c. per lb.

Comparative Price Indexes

(100—1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
98.71	98.73	98.73	100.66

(For Current Prices see page 9)

Chemicals

Acetic Anhydride—Steady demand was noted for delivery against former contracts, while new business was confined to small lots. Quotations were without change.

Bichromates — Activity in the market was restricted to withdrawals against current orders. New business was light and spotty. Producers were accepting contracts for next year delivery at current quotations.

Sodium Acetate—Buying interest was restricted to actual needs. Stocks were ample. Prices were unchanged.

Sodium Hydrosulphite—Consuming interest was fairly active for prompt delivery. Market was steady at unchanged prices.

Sulphonated Oils—Business was spotty, chiefly for immediate delivery. Sulphonated tallow advanced fractionally, with higher cost of tallow.

Sizing Materials

Blood Albumen—Good demand was reported for prompt needs. Market remained steady at former quotations, ranging from 65c. to 90c. per pound, according to quantity.

Corn Dextrin—A steady movement was noted for immediate requirements. Prices were well held for all grades. Gum was quoted at $8.95 per 100 pounds, paper bags, carlots, New York delivery; canary, $8.69; dark, $8.79, and white, $8.53, same basis. Less carlots were 15c. per 100 pounds higher.

Corn Starch — Deliveries against contracts continued to move in good volume. Market was steady and quotably unchanged. Pearl was quoted at $7.14 per 100 pounds, paper bags, carlots, and powder, $7.26, same basis. Less carlots were 15c. per 100 pounds more. Visible corn supply increased 5,818,000 bushels to 19,737,000 bushels for the week ending October 30, compared with 27,971,000 bushels for the same time last year, according to the Chicago Board of Trade.

Egg Albumen—Prices for albumen were dropped 10c. per pound, except for technical, which was unchanged. Consumers continued to take fair sized quantities for immediate needs. Flake declined to $2.31 to $2.33 per pound and powder to $2.35 to $2.37 per pound, as to quantity and seller. Technical was inactive and unchanged at $1.03 to $1.06 per pound, depending upon quantity.

Liquid egg production in September totaled 11,040,000 pounds, compared with 11,003,000 pounds in September last year and the 1947-51 average of 13,018,000 pounds, according to the Bureau of Agricultural Economics. The quantities of liquid egg produced in September for immediate consumption, drying and freezing were all about the same as a year ago. Dried egg produced from fresh and frozen liquid egg totaled 1,441,000 pounds, compared with 1,069,000 pounds in September last year and the average of 2,001,000 pounds. September production consisted of 590,000 pounds of dried whole egg, 448,000 pounds of dried albumen and 403,000 pounds of dried yolk. Output in September last year consisted of 142,000 pounds of dried whole egg, 764,000 pounds of dried albumen and 163,000 pounds of dried yolk.

Frozen egg production during September totaled 9,465,000 pounds, compared with 9,371,000 pounds in September last year and the 1947-51 average of 6,665,000 pounds. Frozen egg stocks decreased 23,000,000 pounds during September, compared with 21,000,000 pounds in September last year and the average decrease in September of 25,000,000 pounds.

Egg Yolk — This market remained strong, reflecting limited available stocks. Prices were advanced 5c. in some quarters, while other sellers maintained former levels. Prices ranged from $1.36 to $1.40 per pound, spot, depending upon seller and quantity. Trading was fairly active for immediate delivery. Production of yolk in September totaled 403,000 pounds, compared with 163,000 pounds, in September last year.

Potato Starch — Supply situation in Maine has improved slightly and offerings were freer for prompt shipment. This lowered quotations about ¼c. per pound. Prompt shipment was quoted at 7c. per pound, carlots, f.o.b. mills and at 6¾c. for late November and early December. Buying interest continued light. From present indications production in Maine is not expected to reach normal volume until late December. Market in Idaho was unchanged and firm at 6½c. per pound, carlots, f.o.b. mills. Stocks on spot were maintained at 8½c. to 9c. per pound, exwarehouse, according to quantity.

Sago Flour—Demand was light, chiefly for actual needs. Raw on spot was unchanged at 7¼c. to 7½c. per pound, and refined, 8¾c. to 9¼c. per pound, exwarehouse, according to quantity. Shipments of raw were quoted at 6¼c. per pound, carlots, exdock.

Tapioca Flour—Moderate demand was reported for Java grades for immediate needs. Prices remained steady and unchanged. AAA on spot was quoted at 8c. to 8½c. per pound and AA at 7½c. to 8c. per pound, exwarehouse, depending upon quantity. Brazilian flour was in scanty supply and maintained at 14½c. to 17c. per pound, exwarehouse, as to quantity and seller.

Tanning Materials

Cutch—Trading was spotty. Shipments were unchanged and steady at 8¼c. per pound, exdock, plus duty.

Mangrove Bark—Buying interest continued light. Shipments were quotably unchanged and fairly steady. East African was quoted at $77 to $78 per ton, exdock; Colombian, $59 per ton, and Ecuadorian, $57.50 per ton, same basis.

Quebracho Extract—Consuming inquiry lacked snap. Sales were restricted to moderate quantities for prompt shipment. Prices were well held at prevailing levels. Solid ordinary was quoted 11 21/64c. per pound, carlots, exdock, and clarified 12 3/16c., same basis.

Wattle—Prompt shipments were maintained at former levels. Buying interest was limited. Primary markets were steady. Fair average bark was quoted at $100 per ton, and merchantable, $96.50 per ton, exdock. South and East African extracts, 60 percent tannin were offered at 10c. per pound, exdock, plus duty.

For Late Market Developments, See Page 4

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- Chlorinated Trisodium Phosphate
- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous
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- Sodium Fluoride
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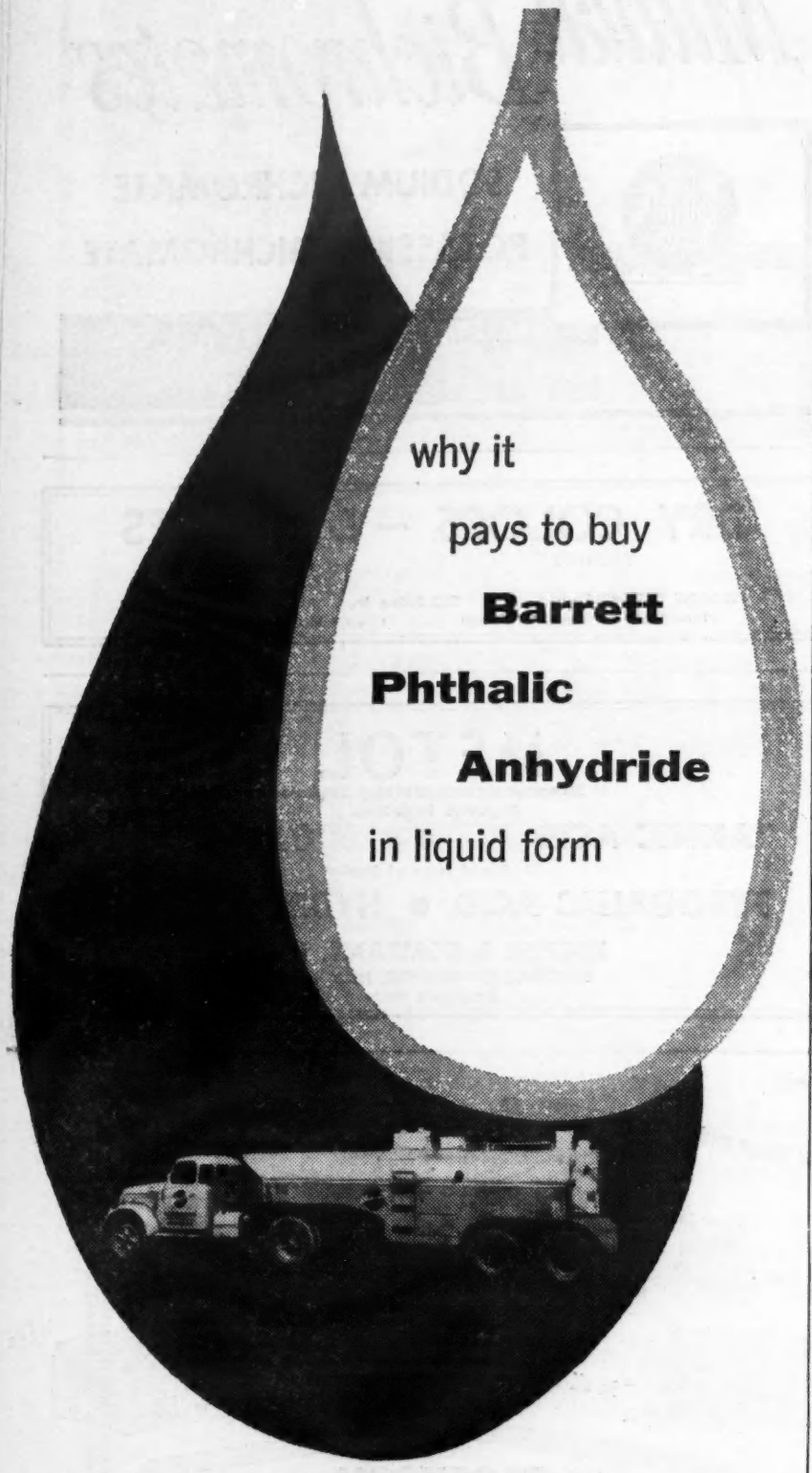

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Coal Chemicals

Some producers brought maleic anhydride and technical fumaric acid down 5 cents late last week, creating a new range in prices. Other prices of coal-tar products were steady at previous quotations.

Some minor changes were noted in buying interest, otherwise the basic supply and demand picture remained the same. Aniline and triphenylguanidin were said to be enjoying a little more call from the rubber industry so far this month. Consumption in rubber had seen a drop during model changeovers in the automobile industry. The tar acid picture was beginning to appear spotty. Some producers reported a sustained demand, while others said demand was a bit easier for the tar acids in general.

Cresylic resins have kept up a fairly good call for resin grade cresols and cresylic acid. Other grades, not in resins so much, were slower. However, meta-paracresol moved to tricresyl phosphate producers in good volume. Demand there was ahead of the supply. Orthocresol was the slow isomer among those tar acids. ADF cresylic acid moved at a relatively steady pace. Demand for imported cresylic, like domestic acid, came from cresylic resins and engine cleaner business.

The crude naphthalene market was still slow. Importers found identical conditions as domestic producers, if not slower activity because they had to compete with consumer contracts. Phenol sales were just fair. A pickup in consumption by phenolic resins producers would help here. Pyridin was still slow. Among the light oils, toluol and xylol were still in short supply. Benzol was available to consumers. Creosote was steady.

Maleic anhydride showed a slight improvement in demand in the past week, as did fumaric acid. A relatively good volume of phthalic anhydride continued to move. Supplies were available. A fair call for alphanaphthol continued. Interest in a government tender was noted. Amino-azotoluene and nonylphenol were relatively slow.

Operations in the steel industry for the week ending November 7 were scheduled to be 92.9 percent of theoretical capacity, according to the American Iron and Steel Institute. This was equivalent to 2,094,000 tons of ingots and steel for castings, compared with 2,132,000 tons in the prior week, 2,146,000 tons one month ago, and 2,200,000 tons one year ago.

Basic Products

Benzol—This basic product was currently rated as easily available to consumers. Producers still sold a substantial volume of benzol. However, buying has fallen back enough to allow some buildup of inventory from each month's production for many suppliers.

One source stated that producers in the Pittsburgh area were doing as well as any other district by virtue of the fact that they are able to ship by barge and reach a larger marketing area. Most members of the trade indicated that conditions were not likely to change very much during the rest of this year. Prices have been steady at old quotations. The most important question in this market now is the outlook for next year. So far, there has been no indication of a move in either direction.

Creosote—The market for this material continued to show steady activity. Sales were fair, although not quite as high as former levels. There was an ample supply for consumer requirements. A source stated that inventories have not built up to the point where they are a real problem. Prices were firm at previously established listings.

Production Estimate

Estimated output of coal chemicals recovered from cokeoven operations during the week ending November 7 was as follows:—

Ammonia liquid, NH_3	lbs.	979,176
Ammonium sulphate	lbs.	35,390,222
Benzol	gals.	3,385,152
Coaltar	gals.	15,526,935
Creosote oil	gals.	867,270
Naphthalene, crude	lbs.	2,371,987
Pyridin, refined	lbs.	25,179
Toluol	gals.	665,840
Xylol	gals.	177,651

Price Trends

Advanced

None

Reduced

Acid, fumaric, tech., 5c. per lb.
Maleic anhydride, 5c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
114.59	114.61	114.61	113.50

(*For Current Prices see page 9*)

Cresols—There was no significant change in the market for these tar acids. The general level of business has been fair, with some sources reporting a rather poor month in October. A few grades were a bit tight due to continuing calls from cresylic resins, engine cleaners and tricresyl phosphate.

Orthocresol was largely the slowest moving of the cresols, while metapara isomers moved as fast as they were produced to TCP. Cresylic resin demand has been steady and relatively good. However, some producers said that buying was primarily hand-to-mouth.

Other sources, whose sales have held up relatively well, felt that resin accounts were buying for inventory in order to protect themselves against the possibility of a tight market if TCP were to come into more general use among gasoline producers. Price schedules of these tar acids were unchanged from previous quotations.

Cresylic Acid—The number of calls for this tar acid have not shown any tendency towards building up. However, buying interest has not fallen down too much either. A few isolated reports indicated a slight crop in sales levels last month. So far this month buying has not picked up to any degree, where it was reported softer last month.

Nonetheless, a fair demand from cresylic resins and steady interest in acid for aircraft engine cleaners has kept the overall level of activity in the market at an even pace. What buying there was, still held to the basis of immediate production needs. Consumers consistently have avoided any buildup of inventories, according to some sources. Others felt resin accounts were buying ahead of production needs.

Importers stated that there has been no real change in the market for ADF acid. A fair amount of acid was being sold for engine cleaner business by a few sources. Demand from cresylic resins was steady and moderate. Some importers have not moved too much cresylic to engine cleaners. Regular orders were just average sizes. Large requests of former times were a rarity.

Naphthalene—Demand for crude material has not shown any indication of picking up. High domestic production capacity, abundant imported crude naphthalene, and reduced industrial consumption have held activity in this market down to a slow pace.

A phthalic anhydride plant which was getting back into operation after a long labor strike and more phthalic output which is on the way were expected to do much towards rebuilding strength in this market. The big "IF" revolved around the question as to how much of the increased phthalic production can be moved next year. Most producers were confident that a long term view of demand would see a good call for all of the intermediate's production. However, it was not too certain if production capacity was getting ahead of current demand potential.

Other naphthalene derived intermediates were going along at a steady, but moderate pace. Price schedules of crude material held the line.

Importers said that 78-degree hot-pressed naphthalene was still very slow. Prices still held to a 3¼c. to 3½c. per pound range. One source reported that a continued softness in price was evident in offers of material from abroad. Several other importers repeated that it was difficult to get low-priced naphthalene from European suppliers due to the uneconomical price. Whichever view you accepted made little difference, because there was not much material being sold anyway.

Phenol—There was relatively little change in the market for this material. Natural phenol has been selling slightly faster than synthetic USP grade. However, some sources reported fairly good activity for synthetic material.

Demand from phenolic resins and adhesives has not come up to former levels, but it has been steady enough to keep a fair proportion of current output mov-

For Late Market Developments, See Page 4

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ing. Supplies of phenol were ample to meet the requirements of consumers.

It was felt that the current market conditions were the result of a circumstance in which production capacity is beyond present demand levels. Buying from penolic resins was not as great as it has been in the past. However, a growing outlet and a high potential market was seen in use of phenolic resins in shell molding for castings. Further expansion of this use and a pickup of demand from phenolic resins used in varnishes and other protective coatings and use in adhesives, could quickly brighten the picture of this market. Current phenol prices were unchanged from previous quotations.

Pyridin—The market for refined 2-degree material continued in the doldrums. A factor which has contributed to the softness of this market was the offering of distressed material on the market by some consumers who had overbought or discontinued its use. It was added that regular pyridin buyers were wary of such offers, not wishing to displease their normal source of supply because the market was characteristically a tight one and could conceivably return to that status. Nevertheless, consumers realized that material "was to be had for the asking." Hence, they only bought what they needed for immediate production. Some consumers also learned to save refined pyridin in times of shortage by re-using it, which is another reason for slow sales now. Prices were unchanged.

Toluol—Present market conditions were unaltered from the tight supply situation which has prevailed all through this year. Coaltar producers moved the bulk of their output to defense purposes. The same picture was expected to hold true for the rest of the year.

Just how long government arsenals will continue to require nitration material was an unknown factor of grave concern to producers. With the shooting in Korea over, stockpile goals will be reached more quickly. Without combat missions to fly, less of the high octane gasoline is needed, accomplishing the same affect on stockpiles. Avgas has already seen some easing due to high production rates through the year and a temporary lack of storage space.

What coaltar producers are concerned with, is that government buying is likely to stop altogether when the goals are reached. Hence, coaltar producers would have 70 percent more toluol to move. One source estimated that industrial demand might pickup 20 percent leaving about 50 percent of current output looking for a home. Some sources also fear the loss of a number of consumers that have been using petroleum chemicals during the shortage.

Petroleum producers indicated that they felt consumers would return to the consumption of toluol as they have done after past shortages of toluol eased up. However, the possibility was brought up, that price cuts may be necessary to achieve that end.

Not all suppliers were pessimistic of the future picture of the toluol market. The more optimistic sources felt assured that industrial consumers would return to consumption of this solvent, should supplies once more become available. x

Xylol—The market for this aromatic was still in short supply. However, it was not as tight as it had been earlier in the year. Producers noted less pressure in recent months. Uses in the paint industry were still consistent. A source indicated that it was unlikely that there will be too much easing here as long as toluol remains short.

Intermediates

Alphanaphthol—A source reported that the market for the alpha isomer was unchanged. There has been a steady demand keeping activity at a fair pace. Some interest was noted in the lastest government inquiry for use in napalm, the material used in flame throwers. Price schedules were steady at old levels.

Aminoazotoluene—There was not very much activity in this market. Producers had sufficient stocks to handle incoming orders. Prices remained stable at previously established levels.

Anilin—A source revealed that there has been a surprising pickup in sales for this intermediate since the start of November. The increase in buying interest was from the rubber industry. Although demand did not surge ahead, producers had not been too hopeful of a pickup from rubber after talking with consumers towards the end of October, it was said. Demand from dyestuffs was said to be relatively steady, but not particularly noteworthy.

Dicyclohexylamine—The market for this intermediate has held to a fairly steady level of sales. The primary outlet for the

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SPECIFICATIONS

p-Nitrobenzoic acid Technical is produced to these specifications: Purity . . . 98.0% minimum.
Moisture Content . . . 0.25% maximum.

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You may find that p-Nitrobenzoic acid Technical is just what you need in the synthesis of antibiotics and other pharmaceuticals—or as an intermediate in the production of rubber chemicals and dyes. Derivatives of p-Nitrobenzoic acid Technical may be useful as pesticides.

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material is in a rust inhibitor. It was felt that this market will eventually seek a level of its own. Supplies were sufficient to meet current consumption requirements. Prices were steady.

Fumaric Acid—A decrease of 5c. per pound created a range of 27c. to 33c. per pound for technical material at press-time. The range incorporates a quantity spread for the material as well as a difference of producer quotations. Buying interest has been fair. However, the price cut, which came simultaneously with a similar revision for maleic anhydride, was expected to contribute to fumaric acid's consumption in polyester resins.

Maleic Anhydride—The price of this intermediate was reduced 5c. per pound for the second time this year. The decrease stemmed from process improvements and increased output, a source said. The lower price was expected to contribute to wider use of maleic in polyesters.

Producer quotations at press-time ranged from 27c. to 32c. per pound in carlots, and 28c. to 33c. per pound in less than carlots. The maleic reduction was made simultaneously with a decrease in fumaric acid, also used in polyester resins.

Nonylphenol—A source reported that sales were not too good currently. Producers were looking for business. Supplies were sufficient to handle orders with prompt shipment. Prices were firm at 32¼c. per pound in tankcars.

Phthalic Anhydride—Adequate supplies were available to meet current consumer needs. Prices were firm at former quotations. Increased production was responsible for bringing this market out of a tight supply position.

Even though some surpluses were reported after last month's orders were in, it was felt that buying was satisfactory, considering the time of year. One source said that a look at the current sales level in consideration of the fact that model changeovers have taken place in consuming industries, such as automobiles and home appliances, revealed that the market was holding up fairly well.

Triphenylguanidin—Some pickup in demand was reported in this market. It was said that the added interest came from the rubber industry where this intermediate is used as an accelerator. One source stated that the pickup came as a surprise but was welcome after previous indications from that industry presented a bleak picture for this month. Prices held firmly to old quotations.

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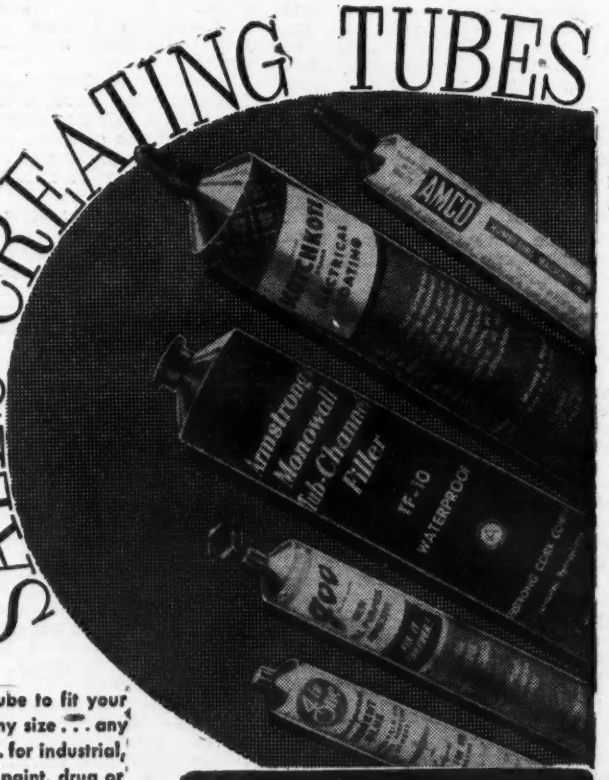

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Consolidated Superintendent

J. C. Crowder has been named general superintendent of the southern division of Consolidated Chemical Industries, Inc. Since 1940 Mr. Crowder has been manager of the Fort Worth, Tex., plant and for eleven years prior to that, he was assistant superintendent of the Houston, Tex., plant.

Copra Exports Level Low From Philippines, Indonesia

Copra exports from the Philippines and Indonesia continued at relatively low levels during September, according to preliminary information received by the Foreign Agricultural Service. Although Philippine exports advanced slightly over August, the copra exports of Indonesia declined sharply, and both countries were running far behind last year in their totals for the first eight months.

Philippine copra exports during September amounted to 63,552 long tons, an increase of two percent from exports of the previous month, but a decrease of 28 percent from September, 1952. Shipments from January through September aggregated 407,152 tons or 15 percent less than the 480,826 tons exported in the comparable period of 1952.

September shipments were consigned as follows:—United States, 27,780 tons (Atlantic 2,382, Pacific 20,706, Gulf 4,692); Canada, 500; Colombia, 6,024; Venezuela, 2,748; Belgium, 4,200; Denmark, 2,500; Germany, 2,000; Italy, 5,000; Netherlands, 6,950; Norway, 2,000; Switzerland, 500; other Europe, 1,350; and Israel, 2,000 tons.

Preliminary figures for coconut oil shipments in September totaled 7,080 tons of which 6,594 tons were destined to the United States (Atlantic, 5,362 and Pacific, 1,232) and 486 tons to Belgium and the Netherlands.

The copra export price as of mid-October was reported at US $200 per short ton, c.i.f., Pacific. Local buying prices were 28 to 36 pesos per 100 kilograms resecada ($142.25 to $182.89 per long ton) in Manila and producing areas.

Indonesia's copra exports during September totaled 21,106 long tons, a decrease of 18 percent from the previous month. Total shipments during January-September amounted to 167,532 tons against 234,686 tons in the comparable period of 1952. The breakdown of the September exports follows:—Western Germany, 12,406 tons; Netherlands, 5,413; Norway, 2,000; Japan, 787; and France 500.

Baker Chooses Rasmussen To Head New Calif. Office

Baker Castor Oil Company, New York, has opened a new sales office at 640 Gilman street, Berkeley, Calif. Marvin C. Rasmussen has been placed in charge to service accounts in the bay area. For two years prior to joining Baker, Mr. Rasmussen was employed as a technical service engineer in the research and development division of S. C. Johnson & Son, Inc. Warehouse stocks of Baker products will be maintained at Hawxhurst & Company, Berkeley, Calif., and at W. R. Grace & Company, San Francisco.

Gen'l Aniline Strike Averted

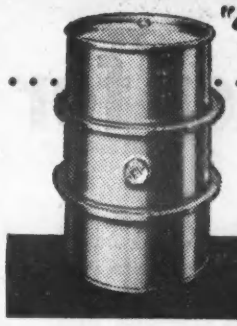
A threatened strike by employees of General Aniline & Film Corporation's Linden, N. J., plant was averted last week when the company and the General Aniline Employees Organization agreed to extend their 1952-53 contract to January 31, 1955, with a 6 cent across-the-board hourly wage boost, a new escalator cost-of-living clause and higher hospitalization and other fringe benefits.

Monsanto Purchasing, Traffic Division Headed by Heffernan

Monsanto Chemical Company, St. Louis, Mo., has appointed Howard J. Heffernan director of its purchasing and traffic department. Prescott Sandidge has been made assistant director of the department. Mr. Heffernan succeeds Clayton A. Wolfe, who died October 20.

Soybean Funds to China

The Foreign Operations Administration has issued three procurement authorizations to China (Formosa) for the purchase of $3,806,000 worth of soybeans from the United States and possessions. The contracting periods for authorization No. 84-0509-00-993-4006, amounting to $2,670,000, and for authorization No. 84-0509-00-999-4005, amounting to $284,000, extend until January 31, 1954, and the terminal delivery date is March 31, 1954. The contracting period for authorization No. 84-0509-00-990-4412, amounting to $852,000, extends until January 1, 1954, and delivery must be made within the first quarter.



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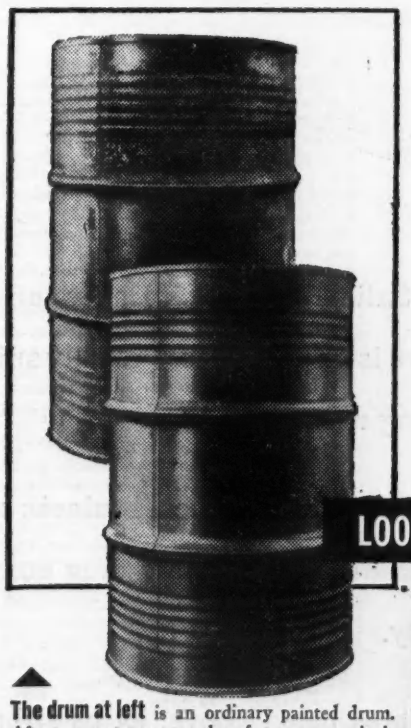

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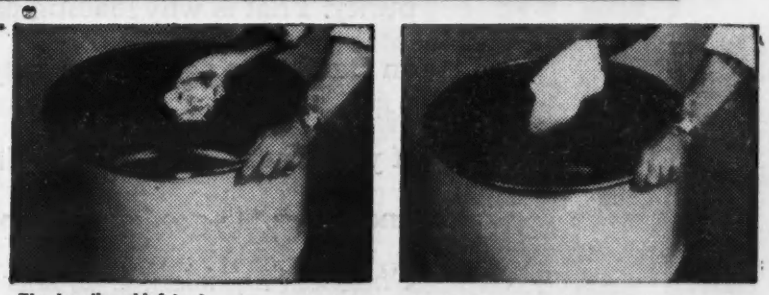

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Drugs and Fine Chemicals

Market conditions in the drug and pharmaceutical industry were reported as slow, generally, and as yet the Fall pick up in buying interest that had been expected was not particularly evident. On drugs and fine chemicals, except antibiotics, it was estimated in various quarters that compared to last year business was off at least 15 percent, or more. In industrial organics, business volume was down about 10 to 12 percent from a year ago, but business was still felt to be good. Most producers felt that the current level of business was nothing to get alarmed about, but represented a more normal pattern.

Prices were firm all across the board with the exception of a slight drop in non-fat milk solids, and an advance of 1⅛ cents per pound in the tankcar price of the so-called antifreeze grade of glycol type permanent antifreeze. This refers only to the mixed glycol runs moving directly into antifreeze. There was no price change in any of the pure glycols. On the pure glycols, business volume in recent months had been off sufficiently so that capacity operations were no longer possible, and production cut-backs had to be made.

Antibiotics moved steadily under a firm price structure. Supplies of most drugs were described as abundant. Practically all of the large volume organic chemicals were plentiful and shipments could be promptly made regardless of quantity. There were exceptions, such as fusel oil which was tight and probably will remain so because of less fermentation alcohol production than formerly, of which fusel oil is a by-product.

Narcotics were firm in price, but the demand for derivatives of natural alkaloid narcotics has over the last year or two steadily dwindled in favor of a synthetic narcotics. Vitamins were is good call from quite adequate supplies. Chlorophyll kept receding from its temporary boom of a year ago, and producers were accordingly fewer in number. Prices on the item were not reduced because it was felt that dropping the price would not sell an extra pound.

Esters, ketones, and ether solvents were expected to hold to present price patterns for the balance of the year. Polyols were in ample supply, each holding its respective competitive position.

Acetone—Solvent uses of this item continued to maintain a good volume, as did also the chemical end-uses. Supplies were said to be quite ample to take care of all requirements, and a steady price position characterized the market.

Alcohol—This market was fair, but demand was somewhat under the level that producers would like to see it. In this respect, however, it was not much worse off than aliphatic organic chemicals in general. Price patterns prevailing over recent weeks were unchanged. However, with the beginning next week of new production facilities which will increase synthetic alcohol output by about 25 percent, a more competitive supply situation was expected to develop by the end of the year. What effect, if any, this would have on prices could not at this point be predicted.

While the overall output of fermentation had been curtailed by certain producers going out of fermentation business, fermentation alcohol was likely to continue as a real market factor, and there was still a very sizable volume on the market with every indication that such production would continue.

Alphatocipherol—Both the alcohol and the acetate were steady at $225 per kilo. Buying interest was not spectacular, but the item kept moving at its usual steady pace. No change was foreseen in the weeks immediately ahead.

Borax and Boric Acid—A leading producer announced that contracts for next year are being mailed out at the same price level as currently prevailing in the market. Business conditions at present are such that a price advance cannot be effected, while, on the other hand, costs of production are such that any reduction in prices would not be practical.

Butyl Solvents—Butyl alcohol and butyl acetate were in quite plentiful supply, with both synthetic and fermentation source material priced at the same level and available for shipment immediately. Fall demand for synthetic resins and lacquer materials containing butyls showed some increase over that of the Summer months, but the overall volume was felt to be off from last year somewhat. This was simply in line with organic chemical business in general, and indicated no change in the relative competitive position of these solvents.

Price Trends

Advanced

Milk powder, skimmed roller, 1c. per lb. spray, ¼c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 6, 1952
88.49	88.49	89.15	93.00

(*For Current Prices see page 9*)

Castor Oil — Castor bean prices were unchanged, f.o.b. Brazil, last week. The current offering was $118. Imports of castor beans and castor oil at New York and Philadelphia were as follows:—

	Pounds	
	Beans	Oil
Last week	1,505,100	550,000
Previous week	1,199,900	2,046,000
Corresponding week, 1952	1,083,150	3,972,000
Total this year	98,897,400	105,880,900
Corresponding period, 1952	101,242,550	63,975,550

Dihydrostreptomycin — This item, as well as regular streptomycin, moved in a market characterized by good demand and a stable price pattern. Supplies were adequate to meet all needs, and this situation was expected to prevail for the balance of the year. A leading producer of bulk antibiotics sold their antibiotic business to another firm which heretofore has confined its operations to packaged goods.

Ethanolamines—Demand for the ethanolamines, mono-, di-, and tri-, was holding up fairly well and business volume was said to be good. While producers were not taxed to capacity output, the buying interest was such that the ehtanolamines were in a considerably better relative demand position than the glycols.

Ethyl Acetate—Demand for this ester solvent was said to be steady at about a 12 percent lower volume than last year. Supplies were regarded as abundant, and immediate shipment of large quantities could readily be had. Prices were unchanged, and expected to hold for the balance of the year.

Ethyleneglycol—Supplies were well in excess of demand, and producers had cut back on their production schedules in recent months, not having sufficient call to justify capacity operations. The price of the so-called antifreeze grade (production runs of mixed glycols sold directly for antifreeze purposes) advanced in price from its former level of 14⅝c. per pound in tankcars, to its new higher price schedule of 15¾c. per pound. There was no price change on regular chemical grades of ethyleneglycol or the other glycols.

Formaldehyde — Resumption of larger volume production by synthetic resin and adhesives manufacturers has resulted in a better Fall demand for formaldehyde, but production facilities for both paraformaldehyde and formaldehyde solution have in the last two years been so expanded that the industry is quite capable of taking care of any volume demand, no matter how large.

Expanding demand for plastics in the fabrication of large volume items ranging from automobile bodies to cabin cruisers was likely to keep plastic demand high for a long time to come. Formaldehyde, of course is not an ingredient of all of the synthetic resins used for these purposes, but it is represented.

Fusel Oil—The market was tight on this item, and there was no foreseeable hope of relief from that situation due to lower operations of the fermentation alcohol industry in general, in favor of larger synthetic alcohol production. As yet, this shorter fusel oil supply pattern had not had any effect of prices other than to lend a firmer tone to the market, but some upward adjustment in prices would not bring any surprise to the industry. An additional factor making the market tight was that all production was not offered for sale, but was acetated at the source, to make amyl acetate.

Glycerophosphates — Prices were unchanged in this market which was described as being relatively slow with respect to demand. Some Fall increased interest was noted, but it was not of the magnitude that had been hoped for in most quarters. Under these conditions no change in price patterns were expected for the balance of the year.

Hexamethylenetetramine — New pro-

For Late Market Developments, See Page 4

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ducing facilities coming into production added to the overall supply, but this involved no departure from the price patterns which have characterized the industry over recent months.

Iodine — Chilean and domestic crude production held firmly to the $1.30 price pattern which the market assumed quite some time ago. Demand was reported as fair, supplies adequate, and these sources were not disturbed by localized buying interest in recent Japanese shipments.

Methanol — The price position of 32c. per gallon on synthetic methanol in Zone 1, and the usual differentials for smaller quantities, or for material in other zones, has long prevailed. Indications were that there would be no change from this stable price pattern for the balance of the year. Output has been increased significantly during the year, making supplies quite plentiful, but the overall demand has kept reasonably good pace with demand. Most production stems directly from petroleum gas, and the result is that no burden of demand has been placed on formaldehyde as a source, because production via formaldehyde is a more costly process.

Methionine—Demand for dl-methionine was reported as holding up well in the export market for the pharmaceutical grade, in addition to a well sustained domestic demand. The newer demand for use in feedstuffs was still growing and leading into appreciable volume. There was no indications of any change in the price structure and a steady price position was expected to be maintained for the balance of the year, and perhaps longer.

Methylethyl Ketone—This item moved to consuming industries in large volume, but, in general, demand was somewhat off from levels of a year ago, according to most sources. Supplies were such that prompt shipment of almost any quantity could promptly be made, and no change in established price structures was expected for the remainder of the year.

Methylisobutyl Ketone — With both ester solvents and ketones being in abundant supply, the supply position was no longer a factor in determining their relative use in lacquer solvents. Each type of solvent accordingly found its way into the market in accordance with the desires of the lacquer manufacturer, depending upon whether he wanted highest solvency at lower cost, or sought to give his product other features, and this was in turn dependent upon the finished product competitive position. However, this interplay of economic forces left a substantial and well sustained demand for both ester and ketone solvents. Both moved in good volume, and both were running this year a bit under the demand of a year ago. Price structures were unchanged from levels which have recently prevailed in the market.

Milk Powder—This market, particularly on non-fat milk solids was described as spotty and irregular, with buying interest revolving around immediate needs only. To take care of this type of demand, there was an adequate supply on hand. Purchases by CCC for the period of October 22 to 28 inclusive amounted to 4,171,766 pounds of spray process material at 16 cents per pound, and 631,410 pounds of roller process powder was bought at 14 cents. This brought total CCC purchases since April 1 of this year to 297,595,669 pounds of spray process and 75,944,279¾ pounds of roller process skimmed milk powder.

Price patterns prevailing during the week ranged in bags at New York, from 13½ to 16.1 cents per pound for roller process powder, and 16 to 17.1 cents for spray process non-fat milk powder.

The Department of Agriculture announced its requirement of 4,500,000 pounds of spray process non-fat dry milk solids packaged in 4½ pound net weight containers, for the school lunch program. Offers should be submitted to the Production and Marketing Administration by telegram not later than November 9. If the entire amount is not contracted for the first week, offers will continue to be re-

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Eaton Labs Vice-Pres.

Dr. L. Eugene Daily has been elected executive vice-president of Eaton Laboratories, Inc., Norwich, N. Y., professional subsidiary of Norwich Pharmacal Company, and assumes full responsibility for the operation of the laboratories. Melvin C. Eaton, president of Norwich Pharmacal has been elected president of Eaton Laboratories, succeeding Howard A. Sumner who previously had been appointed special assistant to the president of the present company.

ceived weekly on Mondays, until the needs are fulfilled.

Narcotics—There was little new to report on these items, other than a continuation of the trend of pharmaceutical consumption in the direction of such synthetic products as isonipecaine, at the expense of natural alkaloids such as morphine. Prices all along the narcotic line were firm and unchanged.

Pentaerythritol—Demand for this polyol was good, and increasing production capacity was not felt likely to be any great burden on the market because of a continuing wider pattern of end-use and growing consumption in established outlets. Supplies were quite ample, however, and demand this year, like most organic chemicals, was off slightly from expected levels. However, planned expansion now coming into play was expected to find a market. Prices were unchanged.

Commerce Dept. Counsel To Antitrust Laws Group

Stephen F. Dunn, general counsel of the Department of Commerce, has been appointed the department's representative on the Attorney General's National Committee to Study the Antitrust Laws by Secretary of Commerce Sinclair Weeks.

Secretary Weeks will remain a member of the committee in order to make final policy decisions concerning recommendations of the Department of Commerce.

At the same time Secretary Weeks said that the office of the general counsel will now coincide its functions with those of the offices of the under Secretaries and the assistant Secretaries. It will maintain liaison internally with the primary organization units of the department and externally with the congress and other federal agencies.

In view of the recent establishment of the Business and Defense Services Administration and the Bureau of Foreign Commerce, Mr. Dunn is redelegating certain functions of the office of the general counsel. Harold C. Corwin, deputy general counsel, will continue to have primary responsibility for legislative services and coordination of the functions of the assistant general counsel and general counsel staff in the separate organization units of the department.

John L. Kilcullen, jr., newly appointed associate general counsel, will have primary responsibilities in the general field of business and defense services and will assist the general counsel in those fields. In discharging this function, Mr. Kilcullen will maintain liaison with other departments of the executive branch, including justice, treasury, defense and labor as well as independent agencies, including the Federal Trade Commission.

Givaudan Expands in Detroit

Givaudan-Delawanna, Inc., and its associate companies, Givaudan Flavors, Inc., and Sindar Corporation, all New York, have opened new and expanded offices in Detroit, Mich., at 18228 Mack avenue. Telephone number is TUxedo 2-8405. The office is under the management of R. M. Stevenson.

Fair Trade Ruling Review Requested of Supreme Court

The Supreme Court of the United States last week was asked to reconsider its refusal to review the decision of the Fifth Circuit Court of Appeals upholding the validity of the McGuire act and the Louisiana fair trade law. Schwegmann Bros., owners of a supermarket in New Orleans, had been enjoined by the lower courts from selling certain drug products of Eli Lilly & Co., Indianapolis, Ind., at below the fair trade contract prices.

Schwegmann asked the court to reconsider on the grounds that a conflict of judicial opinion on fair trade laws now appears to exist by reason of the fact that the court previously refused to review a decision of the Georgia Supreme Court declaring Georgia's fair trade law invalid. In neither instance did the supreme court give any reason for refusing to review.

The high court was in recess at the time the petition for reconsideration was filed but it reconvened today and it is possible that some announcement may be made on the request.

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ACS Medical Chemistry Unit Elects Prof. Burger

Prof. Alfred Burger of the University of Virginia has been elected chairman of the American Chemical Society's division of medical chemistry for 1954. He succeeds Dr. M. G. Van Campen, director of organic chemistry of Wm. S. Merrell Company, Cincinnati, Ohio.

Dr. Amel R. Menotti, vice-president and director of research of Bristol Laboratories, Inc., Syracuse, N. Y., has been chosen chairman-elect, and Dr. Martin T. Leffler, assistant director of research of Abbott Laboratories, North Chicago, Ill., has been re-elected secretary-treasurer.

Chemistry's Possibilities Cited

—Continued from page 5

make it so—or an age which can be graveyard of civilization, if mankind does not rise to the moral challenge of these times."

"The challenges, present and future, of our day are not a new type . . . The challenge of the technological frontier is merely a variation of the old challenge of the American geographical frontier. We are limited by no barriers but our ingenuity and the extent of our faith in the American ideal.

Accomplishments of chemistry

"We see chemistry now being applied to the betterment of human welfare in such ways as:—"A more adequate food supply for the world's mushrooming population; better fabrics with which mankind can clothe itself, at progressively lower prices; a wide range of plastic and other man-made materials for homes and buildings—thus rounding out chemistry's contribution to the vital trinity of food, clothing and shelter; new wonder drugs that have already put an end to a great range of diseases, and that give promise of eradicating still more diseases as time goes on, and a host of other applications of chemistry in the best interest of all mankind," Mr. Munson said.

"But, even as the achievements of chemistry give us new hope for the world of tomorrow, we face the stark reality of the hydrogen, or thermo-nuclear, weapons of war which could annihilate the world. Some say that we have already passed through the Chemical Age, and stand now at the threshold of what shall probably be known as the Atomic Age."

After outlining the constructive possibilities of atomic energy, Mr. Munson said, "It is worth pointing out, however, that there is a definite limit to the number of technically trained experts who are available to us, and accordingly the tremendous number of man-hours and man-years of research that the industry has devoted and is devoting to national defense necessarily represents, to some extent, a delay in the achievement of many of the constructive goals that still lie ahead of us in the field of applied chemistry. Perhaps the chemist who has developed a new rocket fuel to power a guided missile with an atomic warhead is the very man who might have discovered a polio vaccine a few years ago, if it had not been necessary to channel his time and talent into the field of national defense. All of us can multiply the illustrations indefinitely from our own experiences. The simple and inescapable conclusion to be drawn from world conditions is that we must work towards a continuing expansion in the number of technically trained people, for it seems inevitable that the twin demands of continuing to meet the needs of national defense and continuing to meet the expanding needs of the civilian economy will be with us for many years to come," Mr. Munson said.

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Cottonseed World Production Expected to Dip in 1953-54

World cottonseed production during 1953-54 is tentatively forecast by the Foreign Agricultural Service at 16,700,000 short tons on the basis of preliminary estimates of lint production. This volume of seed would represent a decline of 140,000 tons, or less than 1 percent from the 1952-53 outturn, now revised to almost 16,900,000 tons. However, it would be an increase of 9 percent from the prewar average and an increase of 40 percent from the immediate postwar average.

The expected decline in world production is explained largely by the sharp drop of about one-third in Egyptian output, FAS said. Relatively smaller decreases are foreseen in Mexico, Turkey, Pakistan, the Belgian Congo, the Sudan, and possibly the major producing countries of South America.

The most significant increase is expected in the United States, which normally accounts for considerably more than one-third of the world total, India, the second largest cottonseed producer, also anticipates a marked increase. Slightly larger crops are forseen in China, Iran, Syria, Greece and Uganda.

Givaudan Develops Perfume Series for Dry Detergents

Givaudan-Delawanna, Inc., New York, has announced the development of a new series of perfumes prepared specifically for use in dry powdered detergents for household use. This new line of perfume materials is to be sold under the trade name "Tergescents" and, according to Givaudan, are powerful, well balanced, agreeable, inexpensive products ideally suited for their intended use.

This newly developed series of fragrances can be incorporated in proportions of 1/20 to 2/10 of 1 percent when the finished product has reached a dry cool state, the company stated, adding that they are the answer to the odor problems of the detergent manufacturer. Samples and more detailed information are available upon request to Givaudan-Delawanna, Inc., 330 West 42nd street, New York 36.

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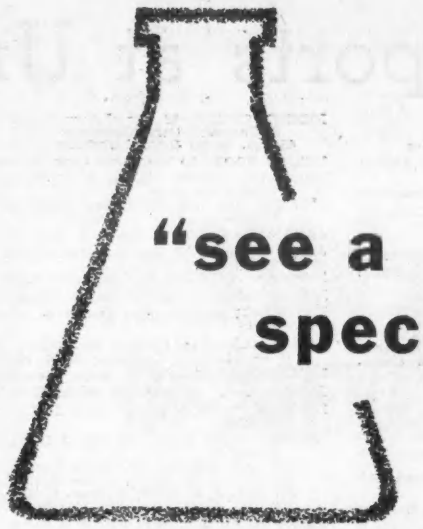

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40 dms, Ciba Co, Rotterdam
ANTIMONY OXIDE—206 bgs, C Gitlan, Antwerp
ARABIC GUM—979 bgs, Chase National Bank, Port Sudan
808 bgs, Guaranty Trust Co, Port Sudan
150 bgs, Bank of Nova Scotia, Port Sudan
250 bgs, Bank of N Y, Port Sudan
350 bgs, Irving Trust Co, Port Sudan
300 bgs, First National Boston, Port Sudan
250 bgs, Bank of India, Australia & China, Port Sudan
250 bgs, Brown Bros, Port Sudan
ARECA NUTS—160 bgs, Wm E Martin, Colombo
ARGOLS—2,107 bgs, Tartaric Raw Materials, Oran
2,450 bgs, Tartaric Raw Materials, Marseilles
BARIUM CHLORATE—50 dms, International Selling Corp, Marseilles
SULPHATE—1,480 bgs, H Dixon & Sons, Algiers
BEESWAX—80 bgs, Smith & Nicols, Rio de Janeiro
84 blks, African Produce Trading Corp, Assab
26 bgs, Bank of Manhattan Co, Callao
584 blks, Marine Midland Trust Co, Lisbon
282 bgs, Lisbon
85 bgs, Puerto Plata
433 pkgs, Port Sudan
BERGAMOT OIL—20 hlf cs, Citrus & Allied Essential Oil Co, Messina
20 hlf cs, Messina
BISMUTH—60 cs, Cerro de Pasco Corp, Callao
BLACK, BONE—400 bgs, Transatlantic Animal By Products Corp, Alexandria
CADMIUM—66 cs, D J Ambrosio, Antwerp
15 cs, Cerro de Pasco Corp, Callao
CANANGA OIL—3 dms, George Uhe Co, Tandjong Priok
CARAWAY SEED—250 bgs, Levy & Levis Co, Rotterdam
100 bgs, P H Petry, Rotterdam
100 bgs, Joel Bieler, Rotterdam
200 bgs, Louis Furth, Rotterdam
200 bgs, M J Golombeck, Rotterdam
100 bgs, Rotterdam
CARDAMOM—22 cs, Wm E Martin, Colombo
5 bgs, Karl H Landes & E Balint, Colombo
CASEIN—1,800 bgs, Tupman Thurlow, Buenos Aires
3,000 bgs, Buenos Aires
158 bgs, Leixoes
CASTOR BEANS—4,250 bgs, Baker Castor Oil Co, Salvador
3,562 bgs, Spencer Kellogg, Manta
140 bgs, Independent Fur Brokers, Guayaquil
680 bgs, Grace National Bank, Manta
419 bgs, Spencer Kellogg, Gonaives
383 bgs, Chase National Bank, Cristobal
600 bgs, Khorramshahr
OIL—135 tons, Bank of N Y, Recife
115 tons, Recife
CINNAMON QUILLS—100 bls, Louis Furth, Colombo
CITRONELLA OIL—25 dms, Lo Curto & Funk, Keelung
CIVET—1 cs, Aden
COALTAR DYES—2 cks, Fairmont Chemical Co, Rotterdam
COCONUT OIL—650 tons, Pacific Vegetable Oil Corp, Manila
255 tons, Lever Bros, Manila
900 tons, Lu Do & Lu Ym Corp, Cebu
COD OIL—200 dms, E F Drew & Co, St Johns
99 dms, Atlas Refinery, St Johns
10 cks, Atlas Refinery, St Johns
99 dms, Reilly Whiteman Walton Co, St Johns
LIVER OIL—170 tons, Arista Oil Products Co, Reykjavik
130 dms, Peder Devold Oil Co, Reykjavik
COPAIBA BALSAM—28 cs, Poons Co, Belem Para
COPPER CYANIDE—44 dms, D Hauser, Antwerp
CORIANDER SEED—308 bgs, Transit Export & Import Co, Buenos Aires
CREAM OF TARTAR—300 bbls, T M Duche & Sons, Genoa
CUMIN SEED—307 bgs, M N Hakkak & Co, Istanbul
376 bgs, Savereign International Corp, Khorramshaar
609 bgs, Rotterdam
DEXTRIN—2,000 bgs, Stein Hall & Co, Rotterdam
30 bgs, Arabol Manufacturing Co, Rotterdam
150 bgs, Bank of Manhattan Co, Rotterdam
DICALCIUM PHOSPHATE—2,204 bgs, Wessel Duval & Co, Antwerp
DIANISIDIN BASE—10 dms, Atlantic Chemical Corp, Rotterdam
DYE, BLACK DIAZO—20 dms, Irving Trust Co, Antwerp
EARTH COLORS—900 bgs, Reichard Coulston, Bremen
EPHEDRIN HYDROCHLORIDE—9 dms, Naumes Forwarding Service, Southampton
EPSOM SALT—800 bgs, Interstate Chemical Corp, Bremen
EUCALYPTUS OIL—10 dms, Sydney
FENUGREEK SEED—100 bgs, Wm E Martin, Casablanca
FISHLIVER OIL—1 dm, Albumina Supply Co, Yokohama
2 dms, Silmo Chemical Corp, Yokohama
FUEL OIL—103,126 bbls, Shell Caribbean Petroleum Co, Punta Cardon
176,000 bbls, Esso Standard Oil Co, Aruba
106,166 bbls, Esso Standard Oil Co, Caripito
84,165 bbls, Esso Standard Oil Co, Amuay Bay
98,659 bbls Esso Export Corp, Caripito
289,781 bbls, Metropolitan Petroleum Corp, Punta Cardon
103,455 bbls, Paragon Oil Co, Tampico
87,403 bbls, Hess Inc, Aruba
10,000 bbls, Asiatic Petroleum Corp, Curacao
91,006 bbls, Asiatic Petroleum Corp, Punta Cardon
213,000 bbls, Esso Export Corp, Aruba
GALL NUTS—115 bgs, Khorramshahr
OX—6 bbls, International Packers Ltd, Brisbane
SHEEP—7 cs, Bank of New South Wales, Melbourne
1 bbl, International Packers Ltd, Brisbane
GARLIC OIL—2 cs, Lo Curto & Funk, Alexandria
GELATIN—100 bgs, Hensel Bruckmann & Lorbacher, Rotterdam
906 bls, Transatlantic Animal By Products Corp, Rotterdam
200 bgs, Rotterdam
GERANIUM OIL—5 cans, Antoine Chiris, Algiers
GERMANIUM DIOXIDE—7 cs, D J Ambrosio, Antwerp
GLUE—300 bgs, Transatlantic Animal By Products Corp, Antwerp
10 cs, Henneux Co, Hamburg
275 bgs, Manhattan Paste & Glue Co, Rotterdam
BONE—20 bgs, Transatlantic Animal By Products Corp, Antwerp
STOCK—408 bgs, Transatlantic Animal By Products Corp, Rouen
GLYCERIN—40 dms, Colgate-Palmolive-Peet Co, Sydney
145 dms, Lever Bros, Port of Spain
GRAPHITE—1,000 bgs, Asbury Graphite Mills, Colombo
900 bgs, C Pettinos, Colombo
325 bgs, Joseph Dixon Crucible Co, Colombo
600 bgs, Asbury Graphite Mills, Bremen
GYPSUM—15,255 tons, U S Gypsum Co, Hantsport
2,700 tons, Newark Plaster Co, Walton
IODINE, CRUDE—28 kgs, International Fertilizer & Chemical Corp, Yokohama
45 bgs, Bache & Co, Yokohama
IPECAC ROOT—10 bgs, Meer Corp, Cristobal
IRON CARBONYL—98 dms, General Aniline Works, Antwerp
OXIDE—441 bgs, Whittaker Clark & Daniels, Malaga
JAPAN WAX—100 cs, Frank B Ross, Kobe
JASMIN OIL—2 hf cs, Van Ameringen Haebler, Messina
KERMANI GUM—21 bgs, Khorramshahr
KIESERITE—2,000 bgs, Purepac Corp, Bremen
LAVENDER OIL—3 dms, Dodge & Olcott, Marseille
LEMON OIL—3 cs, Herman Hollander, Haifa
50 qu cs, Corn Exchange Bank, Messina
LICORICE ROOT—254 bls, Meer Corp, Piraeus
LIME OIL—15 cs, Barclays Bank, Georgetown
LITHIUM CARBONATE—5 dms, I M Sobin, Copenhagen
LOCUST BEAN GUM—376 bgs, J L Quesada, Valencia
320 bgs, Morningstar Nicol, Portimao
100 bgs, W M Allison & Co, Rotterdam
200 bgs, T M Duche & Sons, Genoa
250 bgs, Guaranty Trust Co, Rotterdam
MACE—73 cs, Karl H Landes & E Balint, Grenada
30 cs, Terroglobus Trading Corp, Grenada
MAGNESITE—4,000 bgs, Golwynne Chemical Corp, Madras
MENTHOL—20 cs, Lo Curto & Funk, Yokohama
10 cs, American Express Co, Yokohama
11 cs, P A Dunkel & Co, Santos
20 cs, International Commodities Corp, Kobe
10 cs, Magnus Mabee & Reynard, Yokohama
MILK SUGAR—100 dms, Frank Samuel & Co, Rotterdam
MOLASSES—450 tons, W R Grace & Co, Salaverry
MUSTARD OIL—10 cs, Lo Curto & Funk, Hamburg
MYROBALANS—2,633 bgs, Barkey Importing Co, Vizagapatam
1,090 bgs, Hammond & Carpenter, Vizagapatam
718 bgs, Olson Sales Agency, Vizagapatam
NAPHTHALENE—690 bgs, Fallek Products Co, Rotterdam
2,222 bgs, Rotterdam
NAPHTHENIC ACID—178 bbls, Esso Standard Oil Co, Aruba
NAPHTHOL—3 dms, Hensel Bruckmann & Lorbacher, Rotterdam
2 dms, Gorman & Anderson Corp, Rotterdam
NICKEL CHLORIDE—12 cks, Meyer Shipping Co, Bremen
NUTMEGS—250 bgs, Dodge & Olcott, Tandjong Priok
OCOTEA CYMBARUM OIL—5 dms, River Plate Corp, Rio de Janeiro
OITICICA OIL—200 tons, Brazilian Industrial Oils, Fortaleza
OLIBANUM GUM—370 bgs, Aden
OLIVE OIL—100 dms, Bank of Greece & Athens, Piraeus
50 dms, Lekas & Drivas, Piraeus
30 dms, Makris Bros, Piraeus
50 dms, Castello Packing Co, Piraeus
100 dms, Caruso Products, Piraeus
100 dms, Berolio Import Co, Piraeus
100 dms, A Fantis, Piraeus
25 dms, Import Oil Co, Piraeus
100 dms, B Filippone & Co, Marseilles
70 dms, Credit Suisse, Seville
ORANGE OIL—2 cs, H Marmorek & Son, Haifa
OURICURY WAX—87 bgs, Rio de Janeiro
PALM OIL—108 tons, Rotterdam
104 cs, Rotterdam
PAPAIN—137 cs, American Ferment Co, Colombo
56 hlf chts, American Ferment Co, Colombo
107 hlf chts, Chas L Huisking & Co, Colombo
34 cs, Colombo
PAPRIKA—387 bgs, M J Golombeck, Rotterdam
PARATOLUIDIN—3 dms, Atlantic Chemical Corp, Rotterdam
PEATMOSS—1,250 bls, Premier Peatmoss Corp, Bremen
1,000 bls, New Amsterdam Import Co, Bremen
2,000 bls, Atkins & Durbrow, Bremen
2,000 bls, J E Bernard, Hamburg
1,190 bls, C Gastmeyer, Rotterdam
1,150 bls, E Dunwoody, Bremen
PENTAERYTHRITOL—100 dms, M W Hardy & Co, Rotterdam
PEPPER, BLACK—160 bgs, Otto Gerdau, Colombo
320 bgs, Paul Elbogen, Alleppey
80 bgs, Wolmet Raw Products, Alleppey
80 bgs, Volkart Bros, Colombo
49 bgs, Far Eastern Commodities Corp, Singapore
35 bgs, A C Israel, Singapore
105 bgs, J Berlage, Singapore
70 bgs, Otto Gerdau, Singapore
63 bgs, Joensson & Cross, Singapore
105 bgs, A G Dunn, Singapore
105 bgs, Ludwig Mueller, Singapore
60 bgs, L D Seymour, Singapore
80 bgs, Nederlandsche Handel, Calicut
840 bgs, Cochin
399 bgs, Dogu Trading Co, Beirut
WHITE—170 bgs, Internatio Rotterdam, Tandjong Priok
40 bgs, Borneo Sumatra Trading Co, Tandjong Priok
48 bgs, Volkart Bros, Tandjong Priok
32 bgs, Mincing Trading Corp, Tandjong Priok
PERU BALSAM — 1 dm, Wessel Duval & Co, Corinto
2 dms, Florasynth Lab, La Libertad
PETROLEUM, CRUDE—200,900 bbls, Esso Standard Oil Co, Puerto La Cruz
152,000 bbls, Socony Vacuum Oil Co, Puerto La Cruz
PIGMENTS—1,540 bgs, J D Smith Interocean, Rotterdam
POLLACKLIVER OIL—100 dms, Chas I Huisking & Co, Yokohama
50 dms, Consumers Import Co, Yokohama
POLYVINYL CHLORIDE—1,000 bgs, Antwerp
22 cs, Chemical Bank, Split
POPPY SEED—100 bgs, Levy & Levis Co, Rotterdam
100 bgs, Louis Furth, Rotterdam
100 bgs, R J Spitz, Rotterdam
100 bgs, Rotterdam
POTASSIUM CYANIDE—100 dms, Rotterdam
PSYLLIUM SEED—130 bgs, Corn Exchange Bank, Bombay
PYRIDINE—14 dms, Bank of New South Wales, Sydney
QUEBRACHO EXTRACT—408 bgs, Buenos Aires
QUICKSILVER—200 btls, Rijeka
RAPESEED—340 bgs, Catz American Co, Rotterdam
ROSE LEAVES—65 bgs, S B Penick & Co, Casablanca
ROSEMARY LEAVES—176 bls, Split
ROSEWOOD OIL—6 dms, Van Ameringen Haebler, Belem Para
14 dms, Belem Para
RUTILE SAND—9,938 bgs, Holland Whitehall Co, Brisbane
RUTIN—3 dms, Commercial Banking Co of Sydney, Melbourne
24 cs, Sydney
45 bgs, Sydney
SACCHARIN—5 cs, Lo Curto & Funk, Rotterdam
SAFFRON—4 cs, J Victor & Co, Lexioes
SAGE LEAVES—300 bls, Karl H Landes & E Balint, Genoa
SAGO FLOUR—552 bgs, Chase National Bank, Singapore
SAPONIN—19 cs, W R Grace & Co, Valparaiso
SEEDLAC—100 bgs, East West Development Co, Calcutta
1,000 bgs, Wm Zinsser & Co, Calcutta
200 bgs, Calcutta
200 bgs, Lind Mayer & Co, Calcutta
800 bgs, Mantrose Corp, Calcutta
550 bgs, Gillespie Rogers Pyatt, Calcutta
100 bgs, Brown Bros, Calcutta
400 bgs, Ralli Bros, Calcutta
500 bgs, Suhr & Bundelman, Calcutta
250 bgs, Schwab Bros, Calcutta
135 bgs, Borneo Sumatra Trading Co, Kohsichang
250 bgs, Suhr & Bundelman, Kohsichang
SERPENTINA ROOT—94 cs, Ciba Pharm Products, Bombay
SESAME SEED—150 bgs, Chase National Bank, Corinto
300 bgs, Louis Furth, Corinto
SHARKLIVER OIL—4 dms, Arista Oil Products Co, Keelung
SHELLAC—100 bgs, C H Timm, Calcutta
SODIUM PERBORATE—154 dms, Republic Chemical Corp, Rotterdam
SILICOFLUORIDE — 2,261 bgs, Industrial Raw Materials Corp, Bremen
222 bgs, H Sundheimer, Rotterdam
SWORDFISH LIVER OIL—2 dms, Consumers Import Co, Yokohama
TAPIOCA—112 bgs, Internatio Rotterdam, Tandjong Priok
56 bgs, Far Eastern Commodities Corp, Tandjong Priok
FLOUR—5,000 bgs, Morningstar Nicol, Itajai
400 bgs, Stein, Hall & Co, Itajai
3,000 bgs, Stein, Hall & Co, Kohsichang
1,958 bgs, Stein, Hall & Co, Tandjong Priok
4,400 bgs, Hanover Bank, Barcelona
TARTAR—1,380 bgs, Tartaric Raw Materials, Algiers
TARTARIC ACID—1,000 bgs, Genoa
THYME LEAVES—72 bls, Seeke & Kade, Marseille
111 bgs, H Marmorek & Son, Marseille
THYMOL—4 cs, Sydney
TONKA BEANS—394 cks, Royal Bank of Canada, Port of Spain
90 cs, Machado & Co, Port of Spain
TRAGACANTH GUM—417 bgs, Sherkat Amiran, Khorramshahr
41 cs, Sherkat Amiran, Khorramshahr
17 cs, J J Duffy, Khorramshahr
72 bgs, J J Duffy, Khorramshahr
24 cs, Iran Overseas Corp, Khorramshahr
TRICHLOROETHYLENE—250 dms, Venice
50 cks, Leghorn
UREA—541 bgs, National Shawmut Bank, Rotterdam
VALERIAN ROOT—20 bgs, Lo Curto & Funk, Bombay
VANADIUM CONCENTRATES—800 bgs, Vanadium Corp of America, Callao
VANILLA BEANS—15 cs, L A Champon & Co, Marseille
19 cs, Dammahn & Smeltzer, Marseille
22 cs, Lo Curto & Funk, Marseille
27 cs, Gillespie & Co, Semarang
30 cs, Otto Gerdau, Papeete
VARNISH—3 cs, Bluefries N Y Inc, Rotterdam
WHITING—1,200 bgs, N H Weitzner, Antwerp
1,440 bgs, Pluess Staufer, Antwerp
WOLFRAM ORE—300 bgs, Lisbon
WOOL GREASE—53 dms, Lanoline Products, Sydney
YACCA GUM—228 bgs, Commercial Bank of Australia, Adelaide
ZIRCON SAND—1,780 bgs, Berkshire Chemicals Inc, Brisbane

Baltimore

BONEMEAL—1,102 bgs, Girard Trust Co, Alexandria
CHESTNUT EXTRACT—520 bgs, Bank of Athens, Rijeka
GLYCERIN—70 tons, Manila
SUMAC LEAVES—138 bls, J S Young Co, Palermo

Boston

ARABIC GUM—110 bgs, Guaranty Trust Co, Port Sudan

Los Angeles

COPRA—300 long tons, Procter & Gamble Co, Nasipit
800 long tons, Procter & Gamble Co, Dumaguete
688 long tons, Procter & Gamble Co, Jolo
CAKE—2,000 bgs, Pacific Vegetable Oil Corp, Manila
13,440 bgs, Wilbur Ellis Co, Manila
2,240 bgs, Balfour Guthrie & Co, Manila
4,480 bgs, Atkins Kroll & Co, Manila
MEAL—6,000 bgs, Snow & Co, Manila
CUTTLEFISH BONE—125 cs, The Seed & Feeding Corp, Genoa
EARTH COLORS—1,350 bgs, The F D Davis Co, Rotterdam
IRON OXIDE—2,000 bgs, C K Williams & Co, Malaga
435 bgs, J Lee Smith & Co, Malaga
OREGANO—97 bgs, Hismoco American Co, Marseille
PEATMOSS—650 bls, Nurseryman's Exchange, Bremen
250 bls, Wilbur Ellis Co, Bremen
600 bls, Lastreto-Phillips Co, Bremen
500 bls, H V Nootbaar & Co, Bremen
300 bls, Atkins Kroll & Co, Bremen
250 bls, Bremen
3,200 bgs, The Lastreto-Phillips Co, Rotterdam
PEPPER—25 bgs, Internatio Rotterdam Inc, Singapore
15 bgs, Borneo Sumatra Trading Co, Singapore
PETROLEUM CRUDE—18,205 tons, The Texas Co, Sungai Pakning
SEEDLAC—70 bgs, East Asiatic Co Inc, Bangkok
TAPIOCA FLOUR—1,639 bgs, Stein, Hall & Co, Cheribon
UREA—2,204 bgs, Atkins Kroll & Co, Rotterdam
WHITING—1,200 bgs, Ruess Staufer, Antwerp
100 bgs, Antwerp

Philadelphia

ASBESTOS FIBER—900 bgs, Chas Kurz, Lourenco Marques
CAMPHOR POWDER—100 cs, Bank of Taiwan, Keelung
200 cs, Irving Trust Co, Keelung
CLAY—485 tons, Avonmouth
CHINA—8,462 tons, Fowey
CRYOLITE—2,125 tons, Pennsylvania Salt Co, Ivigtut
FLUORSPAR—2,024 tons, Continental Ore Co, Gijon
GLUESTOCK—697 bls, Port Iero
GYPSUM—6,301 tons, U S Gypsum Co, Hantsport
LICORICE ROOT — 20,898 bls, MacAndrews & Forbes, Basrach
MOLASSES—1,761,479 gals, Santiago
OLIVE OIL—30 dms, Chase National Bank, Seville
PETROLEUM, CRUDE—213,570 bbls, The Texas Co, Sidon
117,581 bbls, Socony Vacuum Oil Co, Covenas
107,095 bbls, Atlantic Refining Co, Cartagena
224,873 bbls, Atlantic Refining Co, Puerto La Cruz
548,484 bbls, Gulf Oil Corp, Puerto La Cruz
328,933 bbls, Gulf Oil Corp, Las Piedras
508,463 bbls, Gulf Oil Corp, Mena Al Ahmadi
QUEBRACHO EXTRACT—1,627 bgs, Buenos Aires

San Francisco

BLEACHING POWDER—100 dms, C M C Chemicals, Manchester
BONEMEAL—4,410 bgs, Consolidated Chemical Industries, Rotterdam
CALCIUM CHLORIDE—3,187 bgs, C M C Chemicals, Manchester
CARAWAY SEED—100 bgs, Lagendorf United Bakeries, Rotterdam
COPRA—600 tons, El Dorado Trading Co, Jolo
500 tons, Cargill Inc, Isabela
1,000 tons, El Dorado Trading Co, Zamboanga
COPRA—500 tons, Cargill Inc, Cebu
500 tons, Cargill Inc, Jose Panganiban
500 tons, Cargill Inc, Hondagua
100 tons, El Dorado Oil Works, Hondagua
365 tons, Atkins Kroll & Co, Pago Pago
300 tons, American Trust Co, Cebu
500 tons, El Dorado Oil Works, Cebu
CAKE—4,000 bgs, Pacific Vegetable Oil Corp, Cebu
FISHMEAL — 2,000 bgs, Internatio Rotterdam, Esbjerg
HERRINGMEAL—2,000 bgs, Albumina Supply Co, Esbjerg
12,000 bgs, Willits & Co, Esbjerg
IRON SULPHATE—400 bgs, F H Lenway & Co, Rotterdam
600 bgs, L H Butscher & Co, Rotterdam
MAGNESIUM CHLORIDE—50 dms, International Selling Corp, Marseilles
10 bgs, International Selling Corp, Marseilles
MOLASSES—10,125,972 lbs, S F Pellas Co, Corinto
PEATMOSS—2,200 bls, Lastreto Phillips Co, Rotterdam
PEPPER, BLACK—20 bgs, Borneo Sumatra Trading Co, Singapore
56 bgs, Mincing Trading Corp, Djakarta
WHITE—16 bgs, B C Ireland, Djakarta
86 bgs, Internatio Rotterdam, Djakarta
PETROLEUM, CRUDE—114,557 bbls, Tidewater Associated Oil Co, Sungai Pakning
PIMENTO—50 bgs, Pacific National Bank, Kingston
RAPESEED—250 bgs, Transatlantic Commodities Corp, Yokohama
TANKAGE—560 bgs, Tupman Thurlow, Wellington
200 bgs, International Packers Ltd, Wellington
UREA—2,643 bgs, Atkins Kroll & Co, Rotterdam
526 bgs, Bunge Corp, Yokohama
VANILLA BEANS—58 cs, Williams Dimond & Co, Papeete
10 cs, American Trust Co, Papeete
WHITING—2,000 bgs, Pluess Staufer, Antwerp
WOOL GREASE—27 dms, S L Abbot Co, Hamburg

Lard, Fat Imports by Cuba Are Higher in 3rd Quarter

Cuban imports of lard and rendered pork fat amounted to 36,300,000 pounds during the July-September quarter, representing an increase of nearly one-third over the previous quarter, according to information received by the Foreign Agricultural Service from the American Embassy, Havana. Imports of tallow and grease amounted to 5,400,000 up 700,000 pounds from the second quarter.

The Embassy reported that domestic commercial production of lard in Cuba seems now to have been definitely discontinued as uneconomical, owing to inability to compete with the prices of lard from the United States, but it also appears that Cuban purchases of lard in the next month or two may decline.

Because lard prices in Chicago have fluctuated widely in recent weeks, the Embassy said, importers are likely to remain adamant against importing large supplies. Moreover, according to expressions of some importers, it was added, the decree in September by the Cuban Minister of Commerce, limiting through October the profits of wholesalers and retailers to 10 and 15 percent, respectively, is not likely to stimulate import activity.

The weak market throughout the second quarter continued into the July-September period. But when the sudden rise in prices took place in the Chicago market, retail lard prices in Cuba soared overnight from about 25 cents per pound, to between 30 and 35 cents with many of the retailers holding but small supplies. Anticipating undue speculation on the part of wholesalers, who held lard purchased at prices from 9 to 12 cents per pound, f.o.b., Chicago, the Minister of Commerce took control of over 2,000,000 pounds of lard stored in Havana refrigerated warehouses. This action, together with the decree limiting the mark-ups in prices, promulgated in the *Official Gazette* of September 11, 1953, paved the way for moving lard stocks to retailers and consumers at prices commensurate with original cost.

Archer-Daniels Appoints

Archer-Daniels-Midland Company, Minneapolis, Minn., has named Daniel A. Copenhaver to its sales force. He will be located temporarily at the new Los Angeles office. Before joining Archer-Danields, Mr. Copenhaver was executive vice-president and general manager of Industrial Oil Products Corporation, Los Angeles. In 1944, Mr. Copenhaver helped found Industrial Oil Products. Prior to that time, he was associated with Bisbee Linseed Company and American Linseed company.

Cleveland PVLA Meets Nov. 12

The Cleveland (Ohio) Paint, Varnish and Lacquer Association will meet November 12 at the Statler hotel. Cocktails will be served at 6 p.m. and dinner at 6:45 p.m. Dr. Jacob O. Kamm will speak on "Economic Trends Affecting the Paint Industry."

Nat'l Science Foundation Makes Research Awards

The National Science Foundation has announced 123 awards totaling about $1,332,000 for research in the biological and the physical sciences, and to support studies and conferences on science, scientific personnel information, and travel of American scientists to international scientific meetings.

This is the first group of awards to be made during fiscal year 1954 by the foundation for the support of basic research and related matters. The duration of research grants in this group ranges from six months to three years, with an average length of twenty months. The research grants were approved by the National Science Board upon the recommendation of Dr. Alan T. Waterman, director of the foundation.

Obituaries

Harry J. Crawford

Harry J. Crawford, director and past president of Quaker State Oil Refining Corporation, Oil City, Pa., died November 3 in that city. He was eighty-six years old.

Mr. Crawford was also director of Columbia Gas & Electric Corporation, New York; Pennsylvania Fuel & Supply Company, Emlenton, Pa.; Mountain Fuel Supply Company, Reno Oil Company, and Lone Star Gas Company.

Gaston F. DuBois

Gaston F. DuBois, consulting engineer for Monsanto Chemical Company, St. Louis, Mo., died November 1 in that city. He was seventy-three years old.

Mr. DuBois received the Perkin Medal in 1943 for his outstanding achievements in the chemical industry. He was credited with developing the first commercial production in this country of caffeine, glycerophosphates, and bismuth metal. He was also active in the development of styrene and phenolic resins.

Glenn L. Austin, an industrial representative for Socony-Vacuum Oil Company in Rochester, N. Y., died October 30. He was fifty-four years old.

Albert V. Belmont, owner of Belcola Extract Company, Newark, N. J., died October 30 in Harrison, N. J. He was fifty-six years old.

Merritt C. Cole, general manager of G. F. Harvey Company, Saratoga Springs, N. Y., died October 31 in that city. He was fifty-eight years old.

Miss Alice Eastwood, curator of botany at California Academy of Sciences, Stanford, Calif., died October 30 in that city. She was ninety-four years old.

Frederick S. Henle, president and founder of S. Henle Inc., New York, died October 31 in that city.

John A. McNair, general attorney for Texas Company, New York, died October 27 in Los Angeles, Calif. He was sixty-seven years old.

Robert H. Seltzer, an assistant sales manager for Bristol-Myers Company, New York, died October 28 in Basking Ridge, N. J. He was fifty-five years old.

Arthur W. Spengler, manager of tinplate purchases for the Atlantic division of American Can Company, New York, died October 29 in that city. He was forty-three years old.

Allen M. Stewart, sales manager for U. S. Gypsum Company, Chicago, died recently in Los Angeles, Calif. He was fifty-five years old.

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Stauffer Appoints Carlson

John S. Carlson has been appointed director of transportation for the Stauffer Chemical Company. Mr. Carlson became associated with the firm as traffic manager of the eastern division in 1948, when he organized the company's first traffic department in New York city. In 1952 he was named general traffic manager for all traffic in the eastern, southern California and northern California division, a post he held until his new appointment. Before joining Stauffer, Mr. Carlson spent a year as traffic manager for Whitehall Pharmacal Company and, prior to that, was traffic manager for E. R. Squibb & Sons.

DuPont Photo Dept. Post to Molin

E. I. Du Pont De Nemours & Co., Wilmington, Del., has appointed Karl T. Molin general assistant to the manager of the photo products department, a new position. W. Allen Taft has been named to fill Mr. Molin's former position as director of sales of the department.

Hoover Commission Names

—Continued from page 3

of Johns Hopkins Hospital; Dr. Michael DeBakey, of Jefferson Davis Hospital, Houston, Tex.; Dr. Evarts A. Graham, of Washington University School of Medicine; Dr. Alan Gregg, vice-president of Rockefeller Foundation; Dr. Paul R. Haley, former medical director of the Veterans Administration; Dr. Theodore George Klumpp, president, Winthrop-Stearns, Inc., New York; Dr. Hugh R. Leavell, of the Harvard School of Public Health; Dr. Basil C. MacLean, of the University of Rochester; Dr. Walter B. Martin, president-elect of the American Medical Association; Dr. James R. Miller, president of Northwestern University; Dr. Milton C. Winternitz, chairman of the division of medical sciences of the National Research Council, and Dr. Otto W. Brandhorst, of the Washington University School of Dentistry.

Antibiotics Certification Rule

—Continued from page 3

section 507 of the Federal food, drug, and cosmetic act do not prohibit the shipment of certified bulk containers of antibiotics to such persons. However, under the provisions of section 146.4 (b)(2)(i), certification should be requested of each repacked batch and of each batch of another drug manufactured from such bulk drug, the shipper has the responsibility drug has been made exempt from the certification requirements by regulation.

"The fact that the drug is to be repacked or manufactured on the order or prescription of a physician does not exempt it from the certification requirements of the act. Under the provisions of section 146.4(b)(2)(ii), it is only when the drug used to compound a prescription is in a container packaged for dispensing that certification of the drug so compounded is not required.

"In the light of these provisions, unless the manufacturer and shipper of bulk containers of antibiotics has, with the consignee, an effective permit issued under section 146.21, if the drug is to be repacked, or under section 146.22, if it is to be used in the manufacture of another drug, unless the repackaged drug or other of seeing that certification is requested of each repacked batch and of each batch of another drug manufactured from such drug."

Ammonium Sulphate Bids Invited for Korea Shipment

Invitations have been extended to the fertilizer industry by the Emergency Procurement Service, General Services Administration, to submit offers by November 16 for furnishing 140,000 metric tons of ammonium sulphate for shipment to Korea. Financing for the procurement has been furnished by the Foreign Operations Administration by issuance of purchase requisition No. 89-230-00-301-4104.

The specifications call for deliveries of the material at the port of export as follows:—25,000 metric tons not later than November 30, 1953; 43,000 metric tons not later than December 24, 1953; 32,000 metric tons between March 16 and April 15, 1954, and 40,000 metric tons between April 16 and May 15, 1954.

Bidders are requested to quote on the basis of metric tons. The source of supply may be the United States and its possessions, Japan, or the European (OEEC) participating countries. There will be no public opening of the bids.

Bids Wanted

Aluminum hydroxide gel, USP, 30,288 1-pt. bots., overseas pack, inv. 253-N, Nov. 16, Army Services Medical Procurement Agency, 54 Sands St., Bklyn. 1, N. Y.

Carbon tetrachloride, 1,600 gals., tech. grade, overseas pack for Taiwan, inv. 3R-28142-C-R, Nov. 16, Gen. Services Adm., Business Service, 7th & D Sts., S.W., Washington 25, D. C.

Chromic acid, 26,400 lbs., inv. 15, Nov. 17, Watervliet Arsenal, N. Y.

Drugs, nitric acid, tech., specific gravity, ammonium hydroxide, sodium metaphosphate, etc., 13 items, inv. 33, Nov. 23, McClellan AFB, Calif.; 244,400 lbs. chromic acid, 25,500 lbs. hydrochloric acid, tech., 250,950 lbs. sulfuric acid, inv. 102-B, Nov. 12, Contracting Officer, Topeka Air Force Depot, Topeka, Kans.

Insecticide, various, inv. 1823-B, Nov. 10, Navy Purchasing Office, Navy Dept., 111 E. 16th St., N. Y., N. Y.

Orthodichlorobenzene, 31,800 gals., inv. 19, Nov. 10, Hill AFB, Ogden, Utah.

Paint, 2,500 gals. enamel, interior gloss, 760 gals. paint, exterior trim, ready mixed, 75 gals. paint; iron oxide, ready mixed, 464 gals. paint, white lead base, exterior, ready mixed, 1,986 gals. paint, oil, interior, flat wall, 750 gals. paint, resin base emulsion, interior, paste, inv. 3G-36480-R, Nov. 12, Gen. Services Adm., Business Service, 7th & D Sts., S.W., Washington 25, D. C.; 175,000 gals. solution, coating, spray type, inv. 50, Nov. 16, Raritan Arsenal, Metuchin, N. J.; 147 gals. paints, primer, synthetic, lacquer, 285 gals. thinner, lacquer, cellulose nitrate, dope and lacquer, blush retarding, 721 gals. thinner, enamel, synthetic, 400 gals. paint, sign, silk screen process, 500 gals. lacquer, enamel, lustreless, quick-drying, inv. 27, Nov. 27, Contracting Officer, Pueblo Ordnance Depot, Pueblo, Colo.; 500 lbs. alkali blue toner paste, inv. 23843, Nov. 6, Government Printing Office, Washington, D. C.

Phosphorus, 3,127,757 lbs., white, inv. 59-B, Nov.19; 11,872,243 lbs. same, inv. 60-B, Nov. 20, N. Y. Chem. Procurement District, 180 Varick St., N. Y., N. Y.

Buffalo PVLA Will Meet Today

The Buffalo (N. Y.) Paint Varnish & Lacquer Association will hold its next general membership meeting today at the Sheraton hotel. Cocktails will be served at 6:30 p.m., followed by dinner and a business meeting. The guest speaker will be Rob Roy MacLeod, commercial manager, western division, Niagara Mohawk Power Corporation. He will discuss "Business Men Are People."

Trade Briefs

Naugatuck Chemical Division, United States Rubber Company, has assigned Lawrence H. Bruce, chemical representative for the latex and aqueous dispersion group, to Akron, Ohio.

Pfaudler Company is producing for Pittsburgh Coke & Chemical Company, Pittsburgh, Pa., a 7,000 gallon stainless steel jacketed processing vessel for high-pressure manufacture of synthetic resins.

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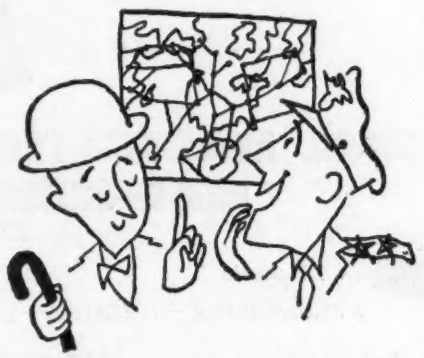

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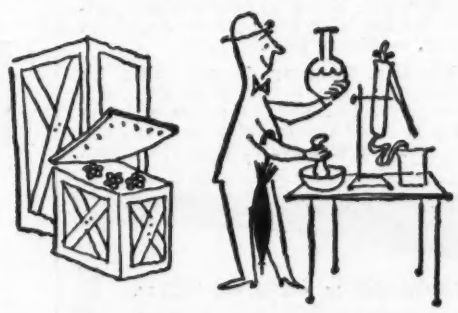

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Botanical Drugs, Spices, Gums

Price changes in the botanical drugs market were not numerous but were chiefly in an upward direction during the past week. Olibanum gum made a slight gain. Other gums were steady, with a certain degree of firmness noted in tragacanth, because of a smaller crop, and in karaya, because of a firmer attitude at the source. Most domestic botanical drugs occupied very firm price positions. Quotations for blackberry root bark were moved up, while other price schedules were firmly maintained. Dealers reported a sufficient supply of most domestic botanicals to cover their contract commitments, but stated that consumers who had not made their needs known earlier might find a great deal of difficulty in obtaining their supplies.

Vanilla bean prices were firmly maintained at previous levels, while the trade expected higher replacement costs over the coming months. The situation in regard to Mexican beans was quite tight, and only one holder in that country was believed to have supplies of old crop material. Cardamom was firmer for shipment with higher prices asked. French celery seed moved upward, due to a lack of replacement offerings. The shortness of the last Mexican pimento crop furnished strength to that material although at the same time, Jamaican pimento prices eased slightly.

Czech anise seed prices were placed in the nominal category. No material would be available until import licenses were approved and there was no indication as to how soon this could be. The last crop of poppy seed in Holland was down substantially in volume, and a firmer undertone in prices for this item was the result. Polish poppy seed prices also were advanced. Arabic gum was slight weaker in price, as demand for this material was reported definitely on the soft side.

Strength was evident for mace and nutmeg, with prices advanced for both. The pepper market was depressed and without feature during the first half of the week, but showed more activity later. White pepper was weaker, while black recovered lost ground.

Barks

Blackberry Root — Earlier quotations were withdrawn and replaced with higher figures. A minimum quotation of 50c. per pound was heard over the past week, increasing the former low-of-the-range by 10c. This item was another example of a material that was brought in in somewhat poor supply, throughout the past collection period, and was consequently to be found occupying a very firm price position.

Sassafras—There was not much demand for this material over the past week, a condition that trade sources reported to be in line with the trend for the item. Less and less interest has gradually been shown in it, according to those in the trade. Prices were steady, ranging upward from 45c. per pound for ordinary material and from 60c. for the select grade.

Beans

Vanilla—All material was firm, with demand holding steady and replacement offered in lower quantities than the market required. Mexican material was scarce, with only one holder possessing any material from the last crop, according to an informed source. The new crop of beans from that country would not be ready until next year, it was pointed out, a fact that helped to firm the market. Bourbon merchandise was also firm, with prices extending from $6 upward to $7 per pound. Prices on material from Tahiti were quoted as nominal due to a lack of offers.

Price Trends

Advanced

Drugs

Blackberry root bark, 10c. per lb.
Gum, olibanum, siftings, 1c. per lb.
tears, 2c. per lb.

Other Articles

Anise seed, Czech, 7c. per lb.
Celery seed, French, ½c. per lb.
Mace, Siauw, No. 1, 1c. per lb.
Nutmeg, East Indian, whole, 2c. per lb.
shrivel, 1½c. per lb.
Poppy seed, Dutch, ½c. per lb.
Polish, ½c. per lb.

Reduced

Drugs

Gum, arabic, amber, sorts, ½c. per lb.

Other Articles

Cinnamon, Ceylon, No. 2, 4c. per lb.
Pepper, black, *7c. per lb.
white, *4c. per lb.
Pimento, Jamaican, ½c. per lb.
Sage, Italian, 1c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
112.40	112.31	111.38	103.31

(*For Current Prices see page* 9)

* Obtained too late for index calculation.

Gums

Arabic—The softness of market demand for this material was held responsible for a drop in the minimum quotation for amber, sorts. An earlier price of 14c. per pound was shaded to 13½c. Powdered, USP grade, was unchanged in price and was offered from 20c. However, this material was also affected by a lack of active interest on the part of consumers, it was stated in the trade.

Olibanum — Prices for tears were not changed during the past week. However, the smaller size, siftings, was advanced 1c., which brought the minimum quotation up to 15c. per pound. No further price changes were expected in the immediate future.

Tragacanth — All varieties appeared somewhat stronger to trade observers during the past week, chiefly because of the smaller crop, it was said. As yet, prices made no advances over their earlier minimum figures and the market from the consumers' viewpoint was said to be without feature.

Herbs and Leaves

Passion Flower — A price of 21c. per pound was maintained over the past week, remaining the lowest for this item. Market demands remained routine, it was stated, but any extensive increase in demand would find very little material not spoken for in dealers' stocks.

Peppermint — Prices remained stationary over the past week. However, any movement was expected to be in an upward direction, due to a dearth of supplies. Demand for this item since the end of the collection period has been fairly good, it was reported by dealers. Quotations ranged from 65c. per pound for domestic material. Imported goods were priced in the nominal category.

Spearmint—A price of 75c. per pound was offered on the market over the past week, this price showing some firmness but remaining unchanged from the weeks previous. Supplies were considered fairly scanty by those in the trade.

Roots

Aletris—A check with dealers showed that there was very little material around, a condition caused by the scanty collection this summer. Prices remained within a range of $1.75 per pound and up, with any changes over the coming weeks expected to be in an upward direction.

Blood — Price schedules quoted previously were fully maintained for this item. The general price trend during the summer and fall has been upward, caused chiefly by a good demand and a shortage of ready material from the year's scrop.

Helonias—Dealers stated that they possessed enough material to cover their contract commitments, but that they lacked any free stock. This situation led to a firm undertone in quotations. Prices ranged upward from $1.75 per pound.

Seeds

Anise—Czech seed moved up from its earlier price of 18c. per pound to 25c., but the new quotation was said to be nominal, since the necessity of first obtaining import licenses before making the material

Imports Detained by FDA

Week ended October 23

New York

Cassia, 84 bales: filthy.
Chillies, 2 lots, 223 bags: filthy.
Cloves, 5 lots, 272 bales: filthy.
Cuman seed, 2 lots, 86 bags: filthy.
Nutmegs, 2 lots, 233 bags: moldy and wormy.
Pepper, black, 16 lots, 1,161 bags: moldy.
Sesame seed, 3 lots, 560 bags: live insects.

Philadelphia

Cocoa beans, 2 bags: sweepings.

For Late Market Developments, See Page 4

Meer Corp.

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Podophyllin ☐
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Quassin ☐
Rutin ☐
Sanguinarine ☐
Scammony Resin ☐
Scopolamine ☐
Solid Extracts ☐
Sparteine ☐
Strophanthin ☐
Strychnine ☐
Yohimbine ☐

available on the market has delayed its appearance. Other varieties were also scarce and the market was said to be faced with a shortage of ready material for the coming weeks.

Celery—French seed firmed up, with the minimum quotation going to 44c. per pound, an advance of ½c. Only a small quantity was quoted for shipment, it was stated, and this accounted for the advanced prices encountered in the course of the week.

Poppy—Both Dutch and Polish varieties were offered at slightly increased quotations. Dutch went up to 18c. and Polish to 17½c., an advance of ½c. in each instance. The strength in Dutch material was accounted for by the smallness of the crop and the resulting shortage of replacement.

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Spices

Cinnamon—Ceylon merchandise was decidedly weaker, with quotations dropping rather sharply. Prices reached a low-of-the-range of 39c. per pound before the end of the week. Previously, the minimum had stood at 43c.

Clove—An earlier low offer for Zanzibar material of $1.05 per pound was unchanged during the week, but the upper edge of the price range dropped considerably, indicating that some further weakening in prices was to be expected, if the present trend continued. No prices were available for Ceylon material.

Mace—The market was reported to be firmer for mace. A price advance of 1c. per pound was noted for Siauw No. 1, putting the minimum for this variety up to 98c. No prices were available for West Indian goods due to lack of material.

Nutmeg—The firmness noted for mace was shown in nutmegs as well. East Indian wholes advanced to 34c. from 32c. and shrivels moved up to 33c. from 31c. per pound. The gain in West Indian was slightly less pronounced, and the minimum of 25½c. was maintained.

Pepper—The market remained depressed during the first half of the week. Dealers here were hopeful of a revival of interest, however, and late on Wednesday thought they detected the beginning of a reversal of the downward trend. Malabar prices by noon on Friday stood at 93c.-94c. on spot; 89c. afloat; 87c.-88c., Nov. shipment; and 84c., December shipment.

White pepper prices fell off sharply during the week. Quotations of $1.17 per pound were reduced to $1.13-$1.14.

Pimento—The shortness of the recent Mexican crop helped infuse a firm note throughout the market. Prices for this material were quoted from 23c. per pound and up. Jamaican merchandise eased a little on spot, going to 29c., off ½c. Guatemalan remained in a nominal position, pricewise.

Sage—Italian registered a slight price decline, dropping 1c. per pound to 16c. Other varieties were steady and the market generally was without special feature.

Justice Drug Pres. Feted

Pearly Arthur Hayes, president of Justice Drug Company, Greensboro, N. C., was honored at a banquet October 30 in Greensboro in commemoration of his fifty years' association with the company. Mr. Hayes, who has been president of the firm since 1921, is a former president of the National Wholesale Druggists' Association and a former chairman of the South Atlantic Drug Club.

Margarine, Vegetable Oils Production Lower in Canada

Canadian production of margarine and refined vegetable oils during January-August, 1953, declined from the comparable months of 1952 while output of shortening increased, according to the Dominion Bureau of Statistics, Ottawa.

Margarine production through August, 1953, totaled 65,800,000 pounds or 2 percent less than the 67,200,000 pound output of the corresponding period in 1952. Annual production has increased each year since its beginning in 1949. From about 74,000,000 pounds the first year, production reached 94,000,000 in 1950, 105,200,000 in 1951, and a record 105,600,000 pounds in 1952.

Production of refined oils (coconut oils and salad and cooking oils) amounted to 22,900,000 pounds in the first eight months of this year against 25,500,000 a year earlier, a decline of 10 percent. In the year 1952, output amounted to 36,900,000 pounds.

In contrast production of shortening through August totaled 80,300,000 pounds or almost 9 percent above the 73,900,000-pound output in the comparable period of 1952. Total output in 1952 was 120,700,000 pounds. Margarine production this year has been characterized by a decline in the use of coconut and cottonseed oils and an increase in the use of soybean oil and palm oil.

McCormick Elects Curlett Western Division President

John N. Curlett, executive vice-president of McCormick & Co., Baltimore, Md., has been elected president of A. Schilling & Co., San Francisco, McCormick's western division. Mr. Curlett, who is chairman of the board of Schilling, succeeds Clarence E. Miller, President of the San Francisco firm until his retirement earlier in the year.

Mr. Curlett joined McCormick in 1930 and has worked in all phases of the company's business. He was elected to the senior board of directors in 1935, vice-president in 1936 and executive vice-president in 1950.

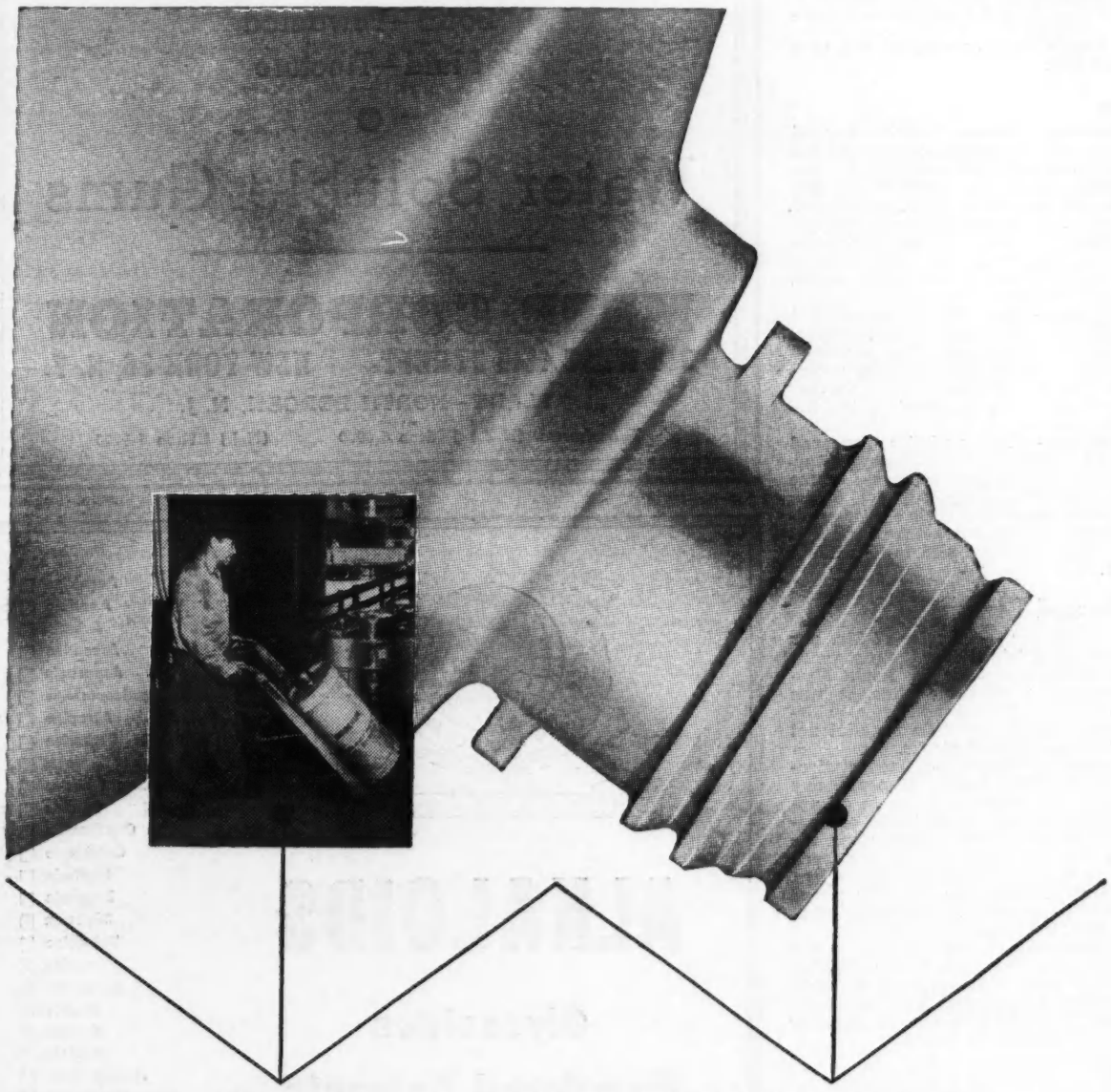
Nopco Appoints Gladstone

Nopco Chemical Company, Harrison, N. J., has named Arthur M. Gladstone chief chemist of its newly-reorganized agricultural chemicals division. The division is marketing a revised line of agricultural emulsifiers — the "Agrimul" series. Before joining Nopco, Mr. Gladstone was employed by Pittsburgh Coke & Chemical Company, Pittsburgh, Pa., as assistant supervisor of agricultural chemical research.

Trade Briefs

Robert Gair Company was judged to have the best annual report of the paperboard container industry by *Financial World* magazine's survey.

George W. Schwarz, vice-president and treasurer of Wyandotte Chemicals Corporation, has been elected president of the Controllers Institute of America.



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Essential Oils, Other Aromatics

A very satisfactory volume of business was done in the aromatic chemicals market. Most manufacturers expressed a belief that the rate of demand would show no slackening in the near future, and that the good pace of orders now underway would continue. The picture in essential oils was somewhat more spotty, although here, too, a fairly active market was encountered. Most dealers found that various specialty items were moving particularly well. Price decreases outweighed advances and the index dropped 0.54 point to stand at 146.95.

Anise oil, of USP specifications, moved upward in price. The advance, however, was of only relative importance as very few dealers were still able to supply material. The replacement situation remained cloudy and no easing on the ban against imports of material from China was expected. A very good call for anethol has been noted, with at least some of the increased demand coming from those consumers unable to fill their requirements of anise oil. Rosemary oil was slightly stronger for the technical grade. The USP grade of this oil was unchanged, but appeared firm at previous listings.

A price of lavandin oil slightly below the earlier minimum was reported. Most expectations in the market indicated a firmer outlook for this oil, however, as buying has been reported as fairly extensive and views in France consequently stronger. Citronella oil maintained its firmer position, and a report from Formosa stating that stocks remaining on that island totaled only 1,000 drums indicated that no downturn in shipping prices was to materialize in the coming weeks. Derivatives of citronella oil were in a stronger position, and some makers quoted prices on individual orders only.

The drum price of benzyl acetate was down slightly from one source. Other aromatics reduced were cinnamic alcohol and rhodinol. Latest reports on geranium oil indicated that both Bourbon and Algerian were entering a period of scarcer supplies. Some fluctuation in prices has been noted of late for Bourbon material, but over the past week both varieties were steady.

Price Trends

Advanced

Oil, anise, USP, 35c. per lb.
Rosemary, tech., 5c. per lb.

Reduced

Alcohol, cinnamic, 10c. per lb.
Benzyl acetate, 2c. per lb.
Oil, lavandin, 5c. per lb.
Rhodinol, $5 per lb.

Comparative Price Indexes

(100—1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
146.95	147.49	144.88	167.16

(*For Current Prices see page 9*)

Essential Oils

Anise—Material was available only in exceedingly small lots from some sources, and was unavailable in any quantities from most of the dealers formerly handling it. Prices for available merchandise were advanced to a low-of-the-range of $2.75 per pound up 40c. over the minimum offer met earlier on the market. Supplies remained shut off, both from China and Holland, and no replacement was expected in the immediate future. More consumers were reported making use of substitutes wherever possible as an alternative.

Citronella—A trade source has released the following information, contained in a letter recently received from its Formosan shipper:—

"The market here begins to become stabilized but still with potential firmness. It is estimated that the remaining stocks in Taiwan are only about 1,000 drums; that is, already about 6,000 drums have been sold. The amount is apparently very low and cannot meet the requirements of abroad buyers. According to past experience, European buyers alone would require about 500 drums monthly."

Prices for spot goods tended over the past week to work slowly upward. While a drum price of 50c. per pound for both Ceylon and for Formosan material was reported from one source, most business was done at figures considerably above this minimum. In addition, observers felt that the prices of spot goods would continue to work upward. The strength of the material was reflected in the market for derivatives, where some manufacturers found it necessary to withdraw quotations and offer prices on direct orders only, because of the increase in cost of the raw material.

Clove—The easier price schedules for bud oil, expected to materialize because of lower prices effected in the raw material, were noted in the market. Quotations ranged upward from $6.50 per pound, in sharp contrast to the much higher prices prevailing during the first three quarters of the year.

Information just released by a trade source has given the following statistics regarding total exports of clove leaf oil to all destinations from Madagascar:—

1947	551,400 kilos
1948	520,900 kilos
1949	479,800 kilos
1950	792,700 kilos
1951	564,200 kilos
1952	624,017 kilos
1953 (7 months)	342,377 kilos

One half, or more, of Madagascar's exports of the oil are reported to be consumed by Europe.

Eucalyptus—Earlier quotations held without changing the minimum prices, in spite of a slight flurry of activity. Whether the activity in this oil would become more extensive was a matter of some uncertainty in the trade. 70-80 percent material was quoted from 60c. per pound and up, while 80-90 percent oil commanded prices of 85c. per pound and up.

Geranium—Bourbon oil tended to become firmer on last week's market, with some indication that the process would continue for the immediate future. A preliminary report from the Reunion Islands just received by one local dealer indicates that the new crop is expected to be below normal. Local prices ranged from a low of $10.60 per pound. In the meantime, Algerian oil tended to show some firmness, after remaining without feature for a lengthy period of time. One source in the trade has quoted the following excerpts from a letter dated October 26 from its Algerian shippers:—

"After a long quiet period we now note a firmness of the market brought about on the one hand by a small autumn crop and on the other hand by numerous purchases made at today's low prices."

Lavandin—The current low-of-the-range price of $2 per pound was shaded from another direction with a quotation of $1.95. The new minimum price was offered for purchases of fifty pound lots or more. Most other dealers were unable to maintain price schedules for lavandin oil at the same figure, and prices ranged to $2.60. Some firmness had been expected over the past weeks and was still looked for by some trade observers, who pointed out that despite the large crop, reports indicated that important purchases had been made since the beginning of the crop and that as a result, the producers were not urgently pressed for cash. Purchases in the country were said to be becoming more difficult.

Lemon—Stocks of Messina oil held by local dealers were reported to be considerably lower than they were some 30 to 60 days ago. The reason was said to be the reduced level of replacement supplies at the source. Reports from Italy indicated that there would be a shortage of higher quality oil at least until the end of the year, resulting in large part from the extensive export of the fruit and the resulting dearth of material for production of oil. Prices for Messina oil were withdrawn by several dealers by reason of exhaustion of stocks. From those sources offering the oil, quotations ranged upward from $6.75. California oil showed no improvement in its tight supply status over the past week. The squeeze on consumers continued unabated and was expected to show no letup in the course of the coming weeks. Only a drastic increase in the area devoted to orchards could permanently relieve the shortage of oil, and this turn of events could not take place in a short time, it was stated. Domestic oil, where it was available, was priced from $7.10 to $7.50 per pound, depending upon maker.

Lemongrass—The recent reduction in the cost of spot material was maintained, but was not followed in other directions, so that a range of 98c. and up was still to be found on the market. Demand was said to be good but not exceptionally active.

Orange—Manufacturers requiring the oil for food uses, and makers of perfume

For Late Market Developments, See Page 4

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materials, continued an active call over the past week. Prices for California oil, sweet, expressed, were reported to range between 76c. and $1.25 per pound, depending upon the brand and quality purchased. Florida material was offered from 68c. Sweet, distilled oil was offered from 40c. per pound from at least one source, and at varying prices elsewhere, but continued to make up only a relatively small part of the business in orange oil. The calm of the present supply position was not expected to be disturbed radically for the coming weeks.

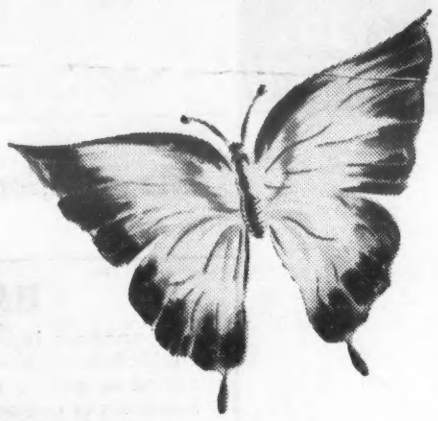
Palmarosa—The price drop on the local market reported in the week previous was maintained. Some further weakness was considered a possibility by trade observers, as it was noted that the shipping price of the oil took a slight dip in the past ten days. Quotations for spot goods ranged from a low-of-the-range of $4.85 per pound.

Patchouli—Prices ranged from a minimum of $7.50 per pound, a figure reached during the week previous. No further decline was noted, and in addition, the shipping price remained steady, so that the market was devoid of significant price movements, in this item.

Peppermint—A firm undertone was reported by almost all trade observers. The current price range, consisting of a low of $4.50 per pound for natural oil and of $4.90 for redistilled material, was firmly maintained and gave evidence of firming tendencies. A great deal depended on the extent of purchases in the coming weeks.

Rosemary—Technical oil firmed up slightly, as an offer for this grade at 55c. per pound was increased to 60c. The move was said to result from the exhaustion of the stocks available at that figure. Oil of USP specifications was available from 75c. and up, and showed no price movements in the week just past. The shipping price from Spain has been rather firmly maintained over the past weeks, and it was this fact that lent strength to the market, trade observers pointed out.

Sage—Dalmatian oil remained quite firm, while some dealers expected to see the necessity of raising their quotations in the coming weeks. Offerings from the origin have been limited for the past weeks, and reports indicated that the new crop will be short. Spanish sage oil was



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firmer, having moved up slightly in sympathy with Dalmatian. The offer of 90c. per pound, currently the lowest quoted on spot for Spanish oil, would be replaced with a higher quotation if the current trend continued, it was said.

Snakeroot—This Canadian oil remained firm within the price range quoted previously. The minimum offer of $29.50 held steady. Changes in price expected with the latest production failed to materialize.

Spearmint—The market continued its showing of strength, as prices tended to rise above the low levels in effect until just recently. Some further strengthening was expected to follow in the coming weeks, according to trade observers. The upward tendency would be increased if demand became more extensive, it was felt. Quotations ranged from a low of $5.75 per pound.

Ylang-ylang—More activity has been noted for this market than previously, with reports in the trade indicating that a particularly good demand has been felt from France. A steadier market was expected as a result. There was no indication over the past week of any substantial price changes on the local scene, where Bourbon oil was quoted from $20 and up, depending upon grade.

Aromatic Chemicals

Acetophenone—The prime grade of material was priced from $1.21 per pound and up, depending upon quantity of purchase. The makers offering a technical grade of the material priced it upward from 90c. per pound in drum lots. Inquiry from perfume manufacturers remained steady and took most of the current production.

Alcohol, Cinnamic — A 10c. per pound reduction in the low-of-the-range price resulted when one supplier released a price schedule having $2.15 as its minimum quotation for the material, when sold in twenty-five pound lots. Other prices for the material remained unchanged, and the manufacturers expected no extensive change in either the price or supply position in the coming weeks.

Anethol—Quite a heavy demand was encountered in the trade, and the rate of consumption appeared to be on the upswing. At least part of the present active inquiry resulted from users of anise oil who were unable any longer to obtain this item. Since imports of anise oil appeared curtailed for an indefinite period, the demand for anethol was due for an extended period of activity. Material of NF specifications was priced form $1.25 per pound and up, while technical grade prices ran from 75c. and upward.

Benzophenone—A good call was noted by makers of this aromatic, who also stated that users showed every indication of continuing to take sizable quantities over the coming weeks. The supply of the material was considered equal for current demands and no tightness in supplies appeared in the making. Prices were steady within a previous range extending upward from $1.40 per pound. No price changes were expected in the trade in the immediate future, it was stated.

Benzyl Acetate—The drum lot price of this aromatic was lowered form one direction. The new low-of-the-range price became 62c. for purchases of this quantity, as compared with the old price of 64c. per pound. Prices from other sources were steady. Demand was rated as moderate and steady by the makers and a continued good pace was expected in this market.

Coumarin—The Food and Drug Administration has moved to ban the use of this material in chocolate and chocolate flavored products. The action will not become final until December 2, allowing time for protests from those interested. The action removes some of the doubt surrounding the future of the material, that has developed since manufacturers voluntarily withdrew its manufacture for food uses pending further investigations into its possible harmful effects on the health of the consumer.

Dimethyl Anthranilate—Stocks moved steadily, it was stated, as perfume manufacturers, currently in their busy season, continued to take substantial quantities. Prices were unchanged, ranging from a minimum of $5.25 per pound. No revisions in price schedules were expected by the makers in the coming weeks.

Rhodinol—Material was offered from a price of $25 per pound from one source, marking a lowering of the minimum quotation from its previous position at $30. The rate of production of the aromatic has been maintained steadily over recent months, while over the same period the low-of-the-range quotation has worked lower. However, no further lowering was considered possible over the coming weeks by sources in the trade.

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Federation of Paint and Varnish Production Clubs

Thirty-First Annual Meeting, Atlantic City, Oct. 29-31

Dr. Calvin J. Overmyer, vice-president of the Elliott Paint & Varnish Company, Chicago, assumed the presidency of the Federation of Paint and Varnish Production Clubs October 30, one day before its thirty-first annual meeting came to a close at the Chalfonte-Haddon Hall hotel, Atlantic City, N. J. He succeeded Gustave H. Westcott of the Philadelphia laboratories of E. I. duPont de Nemours & Co., who served as FPVPC president for the 1952-53 term.

Newell P. Beckwith of the Rinshed-Mason Company, Detroit, Mich., and federation treasurer for the past two years, was made president-elect for the coming year. M. A. Glaser of the Midland Industrial Finishes, Waukegan, Ill., was elected treasurer, while C. Homer Flynn was continued as executive secretary of the organization.

A feature of the banquet on the thirtieth was the award of prizes to affiliated clubs for the best technical papers. First prize was won by the Northwestern club for its paper on "Curing Agents for Epoxy Resins." Second and third prizes went to the New York club, the former for its paper on "Dry Hiding Power of Paints," the third part of a continuing study by the club, and the latter prize for its report on the "Pigmentation of Emulsion Systems."

Awards for Best Presentation

Awards were also made for the best presentation of technical papers, top honors in this category going to the Detroit club for its report on "Glossmeter Design and Gloss Standards." Two clubs — New York and Northwestern — tied for second place.

Third annual presentation of the George B. Heckel paint industry awards was made to Dr. James S. Long, technical director of Devoe & Raynolds Company, Louisville, Ky., and C. P. Jarden, former sales manager of the Philadelphia division of Sherwin-Williams Company and presently a director of the firm. The awards are made to two outstanding members of the paint industry for their contributions to the betterment of the protective coatings field.

Setting the keynote for the federation's thirty-first annual meeting was Dr. R. H. Kienle, director of applied research, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J. Dr. Kienle, who represented FPVPC at the conventions of FATEPEC in Holland and the Oil Colour Chemists Association in Eastbourne, England, took as his topic, "The Protective Coatings Industry—A Practical Science."

Paint Industry Seen Practical Science

Pointing out that the paint field today is dominated by chemists, the speaker declared that the industry is now a practical science and sees its future in terms of advancement through applied science. Outlining briefly the history of the protective coatings industry from its early beginnings to its present scientific era, Dr. Kienle noted that this progress was marked by a number of scientific milestones along the way.

Among these, he cited the understanding of polymeric chemistry and the functionality groups of various products; rheology, or the science of flow; the scientific development of the laws of absorption and dispersion, and the optics of pigmented films.

Joseph F. Battley, president of the National Paint, Varnish and Lacquer Association, told the federation that postwar paint business has been characterized by keener competition and harder selling, which, he said, makes technical men engaged in research and development more important than ever. This is so, he went on, because technical work is an important factor in maintaining business volume.

Latex Paints Panel Discussion

A panel discussion of latex paints was presented with William J. Greco of Socony Paint Products Company, Metuchen, N. J., as moderator, assisted by Henry F. Payne of the American Cyanamid Company, New York, Herbert E. Hillman of the Eaglo Paint & Varnish Corporation, Long Island City, N. Y., W. H. Hoback of Calco Chemical Division, Bound Brook, N. J., E. C. Scholl, a private consultant, and N. J. Timmins of Rohm & Haas Company, Philadelphia, as panel members.

From the standpoint of the market picture and consumer relations, the feeling was expressed that the three consumer factors to be considered are the "Do It Yourself" buyer, the professional painter and the dealer. So far as the dealer is concerned, it was indicated that his interest is primarily an economic one—if he can make money selling latex paint, he is for it.

In those cases where the dealer's interest in latex paint is sluggish, the reasons behind that attitude are generally found to be that he has had poor past experience with other types of water-thinned paints, such as casein paints or resin emulsion paints. More interest on the part

Overmyer Installed as President

The new FPVPC president, Dr. Calvin J. Overmyer, was born in Lindsey, Ohio, in 1897. He attended high school in Fremont, Ohio, and received a B.S. degree from Michigan State College in 1918. This was followed by three years in England as a Rhodes Scholar at Oxford University, where, in 1923, he was the first American to receive the degree of Doctor of Philosophy in chemistry.

After teaching chemistry at Michigan State, Dr. Overmyer's first professional connection was with Devoe & Raynolds Company at Boston, later at Louisville, Ky., and Chicago, where he was factory superintendent. At present he is a vice-president of the Elliott Paint & Varnish Company, Chicago.

During World War I, Dr. Overmyer served as an infantry second lieutenant and, in World War II, he was a colonel in the Chemical Corps. He was awarded the medal of the Legion of Merit for his services and was named an Arkansas Traveller by Gov. Laney in recognition of his services to that state.

Dr. Overmyer has been very active in federation affairs for some years and is a past president of the Chicago Paint and Varnish Production Club. He was chairman of the program committee in 1949, the Paint Industries' Show committee in 1950, the Mattiello lecture committee in 1951 and the meetings committee in 1952.

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of the dealer is being aroused through private consumer demand for the products and selling effort on the part of the manufacturer, it was pointed out.

'Do It Yourself' Buyer

As for the "Do It Yourself" buyer, the customer's interests are aroused chiefly by the working characteristics of the product, such as the fact that his tools can be washed out with water, that the film can be touched up without showing and fast setup to give quick use of the room, etc.

Professional painters, on the other hand, present the difficulty of resistance to using the paint, it was stressed. This resistance was thought to be due to their resistance to trying out anything new, plus a feeling that somehow latex paints are associated with the "Do It Yourself" movement, to which they are opposed. A different brushing technic is needed in latex paint work, and some painters have been slow to adjust to this and thus have assumed an early bias against the item. In addition, unhappy experiences with previously available water paints were felt to be a factor in sluggish painter acceptance.

As for the reason that more paint manufacturers are not making latex paints, the feeling was that many smaller manufacturers are afraid of the item because of the necessity of careful operations and control beyond the ordinary care in oleoresinous paint manufacture.

The primary film former in latex paints is a latex or a latex with some alkyd resin modification, it was noted. Because of the low viscosity of a latex it is necessary to add a protective colloid, such as casein or soya protein. A protein gives good leveling, brushing and package stability to a paint, but unsatisfactory suspension properties. Synthetic colloids give poorer working properties, but good suspension. It is good practice in latex paint formulation to use a combination of natural and synthetic protective colloids.

Fungicides must be used in latex paints to prevent bacterial decomposition. When using a fungicide, it was stressed, it is important to maintain a pH in the system at which the fungicide is most effective. Anti-foaming agents must be used in latex paint manufacture primarily to prevent excessive bubble formation in the manufacturing process, but also to prevent foaming in normal usage.

It was pointed out that any latex paint manufacturer needs a good pH meter and must keep it standardized because of the importance of controlling and adjusting pH in manufacture. Raw material control was felt to be much more important in latex manufacture than in orthodox paint manufacture. Production equipment can be the same as is used in turning out regular paints.

Dispersion and Film Formation

Perhaps the most spectacular difference between latex paints and an orthodox paint, it was stated, is the fact that the latter are dispersions of pigments in continuous liquids, while latex paint vehicles are in themselves dispersions of a high polymer in water.

Pigment dispersion in latex paint manufacture involves the problem of taking a powder which is dispersed in air, and converting it to a powder dispersed in liquid, the liquid in this case being water, it was indicated. This, itself, presents problems because water is not a good wetting medium for pigments and has a very low viscosity. Therefore, it was added, it is necessary to use a wetting agent and also to thicken the water in order to get it to adhere to the pigment agglomerates so that dispersion shear forces can be mechanically exerted in dispersion operations.

To make a latex paint, you must have a pigment dispersion in water and a polymeric resin dispersed in water. These must be combined in the package and, therefore, the dispersion agent used in each case must be compatible, one with another, or a kick-out may result.

When the latex paint film is formed, the two phases, the external one dispersed in water and the internal one consisting of dispersed resin, must, upon application and evaporation of the water, coalesce, the resin and pigment particles packing closely together, to form what appears to be an almost continuous film. For this reason, it is important to have the pigment so dispersed that the pigment particles be of relatively the same size as the resin polymeric particles.

The merits of polyacrylic latices were mentioned. It was pointed out that they have high mechanical stability high chemical stability in the presence of soluble salts, and high freeze-thaw stability. Various acrylic latices have varying degrees of flexibility and distensibility, are water white, unsaturated and, therefore, non-yellowing

Types of Latex

There are currently eight leading commercial types of latex on the market, and more will be developed. All are high polymer materials dispersed in water. As for the resins themselves, they are all long-chain hydrocarbons, but each is somewhat different from the other. These differences arise in large part from various side groups along the hydrocarbon chain. If the chain is unsaturated, it will not permit cross-linkages, and will be non-yellowing. If it has double bonds in the chains, these will permit some cross-linkage, but will tend to yellow.

Where the basic unit in the chain is an ethylene group, the resin characteristics will be such that the chains will allow easy sliding of one over the other, and also rotation around the carbon atom. Such a resin will have considerable plastic flow. Introduction on the chain of a ring group results in a more rigid structure because the presence of a ring or other large group on the chain tends to prevent the easy slipping of one chain molecule over the other, and also tends to inhibit the rotation around the carbon atom. Chains with ester groups, such as polyvinyl acetate latex, are subject to hydrolysis and are therefore sensitive to water and alkali. Side groups of fluorine are close to the chain and make for high melting point, greater strength and good chemical resistance.

In response to questions from the floor, the feeling was expressed that the new high hiding odorless alkyd flats may retard the sale of latex paint, but cannot stop them. Other information developed under direct questioning of the panel was that the alkyd used in latex finishes must be perfectly compatible with the resin in the latex, but also must first be emulsified.

Putty, Caulking Compounds Discussed

Considerable information grew out of a round-table discussion on putty and caulking compounds. Moderated by H. Kelfer of the Sterling Paint & Varnish Company, Malden, Mass., the panel consisted of Dr. R. L. McCleary of Witco Chemical Company, New York, G. E. Hann of Montreal, W. M. Lawall of NPVLA and H. W. Hibbert of Pecora Paint Company, Philadelphia.

When putty is made with linseed or other oil and calcium carbonate, it was noted, the calcium carbonate pigment used in the putty should have a wide range of particle size, rather than all coarse or all fine particles. Fine particles of pigment, it was pointed out, lend to a putty the properties of good oil retention and good lengthening, but, at the same time, give it poor knifing characteristics.

Coarse particles, on the other hand, provide good knifing properties, but yield poor oil retention and good lengthening characteristics. It was felt that a good pigmentation for putty would be one consisting of 75 to 80 percent marble dust and 20 to 25 percent of a very fine particle size calcium carbonate.

Elimination of Sweating Period

When the pigment mass is restricted wholly to ground calcite with smooth crystalline faces, the sweating period in manufacturing operations can be eliminated, and less oil used. While it would appear that since finer pigments usually have higher oil absorption than coarse pigments, putty containing substantial amounts of fine pigments will require more oil. However, it was noted, this is not the case.

The use of fatty acids in the oil vehicle to promote wetting of the pigment in the process of manufacture should be very carefully controlled, because much more than "wetting" is involved. The fatty acids will eventually form soaps with the pigment, and these calcium soaps tend to have an adverse effect on putty length. Some fatty acid should be used in the

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vehicle, however, so as to get a controlled amount of soap formation which will lend stability of the putty and tend to prevent oil separation.

Glazing Compounds

The same broad general principles that apply to putty formulation also apply to the formulation of caulking compounds, the panel revealed, but there are differences to be made in the choice of oils used and in pigment combinations. The pigment mass should be higher in fine particle-sized pigments than in the case of putty, and more of the vehicle should be of higher polymer molecules. Only semi-drying vehicles containing more fatty acids should be used in caulking compounds. The preferred primary binder material in caulking compounds is a heavy-blown drying oil, and the vehicle combination should consist of such things as blown soybean oil and polybutenes.

The major pigment portion should be a finely ground calcite. Some fatty acids should be used to assist in wetting the pigment, especially the more fibrous pigments used in the pigment combination. Some fibrous pigment, such as a fibrous talc, should be used in the caulking compound to improve the resistance of the compound to "slump" and also to promote crack resistance. A preferred technic in making caulking compounds is to mix all of the vehicle together well before adding any pigment. Then the fibrous pigments should be added, followed by the ground calcite. After the pigment is all in the mixer, the mixer should be allowed to run for a considerable length of time.

Equipment Choice

The usual equipment used in putty and caulking compound manufacture are such things as dough mixers, putty chasers and other heavy duty mixers. Equipment used must be such that complete wetting of the pigment is obtained, with high shearing action, and this requires high horsepower. A mixer should be selected which will not beat air into the batch.

The mixer should be located at such a height as to allow the filling of drums and cans directly from discharge of the machine. It is important from an economy standpoint to integrate the filling equipment with the discharge of the mixing machine. Filling equipment may be of the auger type, or other types which will fill the container from the bottom up, thus displacing the air in the package as it fills.

Caulking and Glazing Problems

The problems which caulking compounds present in storage and use are, primarily, cracking of the bead, bleeding out of the oil, weeping and sagging of the compound and wrinkling of the surface. A fifth problem of current interest was also cited, namely, the physical problem involved in glazing the large picture windows in modern building construction, where the large area one-piece expanse involves strong wind pressures against the glazing compound, tending to force it out along the frame. This, it was said, leads to subsequent leakage.

Accordingly, the panel indicated, the industry must now strive to furnish the glazing trade with new compounds of maximum safety factors and, at the same time, must train the glazers in new technics for installing the new-type windows.

As for government specifications on putty and glazing compounds, the feeling was expressed that there is drastic need for revision of practically all specifications to bring them up to date with the modern technological developments. It was also felt that the industry must provide durable glazing compounds which will not require painting for metal windows and the new metal buildings. If this is not done, it was emphasized, some business volume will be lost to the extrusion type of vinyl compounds. A caulking primer was deemed unnecessary if the window surface is in good condition. If it is not, it should be cleaned and primed for good compound adhesion.

M. W. Westgate of the NPVLA scientific section led a panel discussion on fire retardant paints. Outlined at the panel were such types of fire retardant coatings as (1) intact film that resists flame, such as ceramic coatings; (2) less combustible paint films which by heat reflection tend to protect the surface (ordinary white

—Continued on page 86

Papers by Affiliated Clubs

Curing Agents for Epoxy Resins

Northwestern Club

Epoxy resins are condensation products of bisphenol-A and epichlorohydrin. Bisphenol-A, of course, is a condensation product of phenol and acetone. The reaction of the bisphenol and epichlorohydrin results in a poly-ether chain with hydroxyl groups attached at various points. The proportions of reactants are so controlled as to produce epoxide groups at the ends. Molecular weights are controlled so that various resins can be made from free flowing liquids to hard resins melting in the range of 135°C.

The curing of epoxy resins into films may be accomplished in various ways. They may be cross-linked with phenolic resins at elevated temperatures; cross-linked with urea or melamine at elevated temperatures; cross-linked with each other by connections effected through polyfunctional aliphatic amines, such as ethylenediamine or diethylenetriamine; esterified with vegetable fatty acids, rosin or tall oil acids, or cured by monomeric acids or acid anhydrides such as phthalic.

Curing by Acids Seldom Used

Curing by acids is not much used, but the others are of real current interest. The aliphatic amines react with the epoxy resin chain to form bridges between the different chains, and build up a big molecule. Amine resins, such as urea and melamine, are complicated resin structures in themselves. In interaction with epoxy resins, the epoxy resin tends to cure the amine resin while, at the same time, the amines in the urea or melamine resin tend to cure the epoxy resin. The phenolic resins used in this study with the epoxy resins are of the formaldehyde/allylphenol type or the formaldehyde-phenol condensates containing sulphone groups.

As control coatings in testing the film properties of epoxy resin finishes cured in various ways, the club used a short oil alkyd resin of the type frequently used either alone or in combination with melamine resins in baking finishes, a 65 percent soybean pentaerythritol alkyd resin and a twenty-five gallon tung oil phenolic varnish.

Air-Dry Epoxy Finishes

A good air-dry coating is one in which six parts of ethylenediamine combines with 100 parts of epoxy resin. A similar formulation made with diethylenetriamine yields a good baking finish. Triethylenetetramine can also be used effectively. In baking finishes, effective flow control agents consist of 3 percent of a urea resin or 1 percent of a silicone resin. In general, it was shown that air-dry coatings based on diethylenetriamine are inferior to those based on ethylenediamine or triethylene tetramine.

Epoxy compositions, except for esters and certain urea and phenolic modifications, tend to increase in viscosity on standing, with the aliphatic amine compo-

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sitions increasing in body the fastest and the polyamide compositions having somewhat greater shelf life. The aliphatic amine finishes dry sufficiently before full curing to permit handling, but a complete cure is obtained in twenty-four hours or more, depending upon the composition.

Hardness of Finishes

As compared with the alkyd resin and oleoresinous control finishes mentioned above, the air-dried epoxy resin finishes, unpigmented, are harder and tougher. Maximum impact resistance of epoxy finishes, based on either aliphatic amines or on polyamide resins, is reached in only one day, indicating complete cure. The best mar resistance was obtained from epoxy resins cured by cross-linkage with allylphenolic resins. Flexibility and impact resistance of finishes based on urea modifications of epoxy resins is unsatisfactory with the low molecular weight epoxy resins, but quite satisfactory with the higher molecular weight resins.

Cold check tests run for a duration of ten days showed the controls and all experimental epoxy finishes to be satisfactory. As for the optimum ratio of epoxy resins and polyamide resins, this is a matter that must be experimentally worked out for each epoxy and/or urea or melamine resin, a good starting point from which to procede with further testing, being a fifty-fifty ratio.

From the vast amount of experimental work represented by this club paper, the following conclusions of a general nature were drawn by the club:—

Club's Conclusions

(1) The best overall coatings are those in which the film is cured by urea or phenolic resins, but these systems require elevated temperatures for curing. (2) Epoxy resin esters, cured either by oxidation or heat polymerization, provide films with good gloss and color retention, good flexibility and solvent resistance superior to alkyd resins. (3) Epoxy finishes based on aliphatic amines may be either air dried or baked at low temperatures, beginning to bake at temperatures lower than phenolic or urea systems. (4) Aliphatic amine epoxy finishes cured at room temperature are superior to alkyd resin finishes in solvent and chemical resistance, impact resistance and film hardness. (5) Polyamide resin are highly effective obtaining cured compositions in combination with epoxy resin. These may be cured by either air drying or baking. Their films are superior in impact resistance and flexibility to those based on aliphatic amines.

Pigmentation of Emulsion Systems

New York Club

The New York club has been investigating various phases of dispersion and reporting on its findings at federation conventions for several years. This year its study of immediate concern involved the pigmentation of latex paints.

Two latex vehicle systems were used in this work. One was a system based on a butadiene/styrene copolymer of approximately 70 percent styrene, which had to have plasticizer added, and the other was a pre-plasticized polystyrene emulsion. These two systems were studied at pigment-volume concentrations of 15 percent, 30 percent and 45 percent. These pigmentations were studied for their dispersion characteristics on the following equipment: — Three-roller mill, high speed mixer, high speed stone mill, colloid mill and pebble mill. Their dispersion characteristics were determined by studying the effect on package stability and on film characteristics. The pigment used was rutile titanium dioxide.

Tests observed on the six latex paint systems were the following:—Viscosity stability, pH variation, normal settling and scrubbing resistance of the film. The paints were made by different methods.

There were wide variations between the viscosities noted for the various methods of preparation. However, the variation in viscosity obtained among the six paints made by any one method was so great and so inconsistent, that no one method could be said to have produced the highest or the lowest viscosities. After ten months, however, it was evident that paints of the lowest package viscosity were those of the lowest pigment volume concentration, while those of the highest package viscosities were those made with the highest pigment volume.

It was also the paints of the highest pigment volume that showed the greatest increase in viscosity over the ten-month observation period. In general, it was observed that the paints with the highest final viscosity were those made with the high speed mixer, and the lowest viscosity group was that made on the high speed stone mill, followed closely by the pebble mill paints.

pH Variations

There was little difference between paints prepared by different methods insofar as pH variation was concerned. Settling tests were run for only one month and no significant differences were observable. There appeared to be no correlation between the arc scrubability of butadiene/styrene latex paints and their method of pigment dispersion. Some effect was noted on the pre-plasticized polystyrene paints.

It was the conclusion of the club committee working on this project that more detailed study is required on this subject to determine the effect of such variables as the relative amounts of water present in the final paint at application consistency, whether the latex film starts to abrade immediately on the scrub test or not until it is softened by the water after a certain length of time, whether standardized detergent solutions for washing should be used instead of variable soaps, effect of film thickness and a host of other variables.

Comparison of Alkyd Flat, Latex, and Other Interior Wall Paints

Baltimore Club

Work was done by the Baltimore club in carrying on a more detailed and expanded comparison of various types of low sheen finishes than was reported in the paper presented at the convention a year ago, and it was felt that finishes compared this year were more nearly representative of commercial alkyd flat finishes than the earlier samples. In addition, comparisons this year included alkyd resin modified latex paints.

Paint in the current series of tests included white latex paint of the casein modified type, a green and a white improved alkyd resin modified latex paint, two white commercial alkyd flats and a green commercial alkyd flat. As additional controls for comparative information, a green and a white semigloss enamel conforming to Federal Specification TT-E-508 were included.

These paints were tested to show their respective merits in package stability, application characteristics, appearance of the dried film, recoating and adhesion, and washability.

Casein, Alkyd Formulations Compared

The formulations of alkyd flats and of the TT-E-508 enamels are of characteristic types and need not be shown, but a comparison of the formulations of casein-modified latex paint and the alkyd improved latex paint (which also contains casein) is of interest and the white formulations only are listed below:—

	Alkyd Improved Latex Lbs.	Casein Latex Lbs.
Long oil alkyd resin	41.5	....
Cobalt naphthenate, 6%	0.8	....
Anti-skin agent	0.3	....
Ammonium hydroxide, 28%	1.3	....
Poly-ether emulsifying agent	4.2	....
Casein, 13% aqueous	100.0	....
Casein, 15% aqueous	....	40.3
Titanium dioxide, rutile	225.0	252.0
Lithopone	125.0	72.0
Zinc oxide	....	3.6
Mica	75.0	17.9
Aluminum stearate	....	16.4
Diatomaceous silica	25.0	....
Potassium phosphate, 3% aqueous	....	60.4
Water dispersible lecithin	4.4	....
Water	220.4	165.5
Preservative	....	3.4
Fungicidal agent	....	15.7
Anti-foam agent	1.0	1.7
Styrene-butadiene, 70-30	346.0	....
Styrene-butadiene, 60-40	....	346.1
Cobalt acetate, 1% aqueous	....	1.7
Total	1,169.5	997.7

An accelerated test for settling characteristics was used in which the sample was given a centrifuge spin at 2,000 rpm. This did not prove to be a practical test because there appeared to be no correlation between centrifuge tests and shelf stability ratings. After three months all paints were in excellent condition in the package. The viscosity of both latex paints and alkyd modified latex dropped slightly

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after three months' aging. Commercial alkyd flats either did not change in consistency, or increased slightly. The semigloss enamels were unchanged. In three out of four samples of latex paints, the pH dropped after three months' storage.

Only the semigloss enamels were comparatively difficult to brush. The other finishes, both latex and alkyd flat, had good brushability. All finishes had good leveling characteristics, but the straight latex finish showed some brush marks.

Film Appearance

This test embraced more observations than the name would indicate, including non-penetration properties. Each paint was applied in one coat over a surface consisting of alternate strips of wallpapered plasterboard, bare plasterboard and shellac sealed plasterboard.

Sheen uniformity was observed. The alkyd resin modified latex paints had excellent self-sealing properties, whereas the simple latex product did not. The alkyd flats varied from product to product, two of the three being satisfactory, and the other not. As expected, the semi-gloss enamel was not self-sealing. Apparent hiding showed the greens satisfactory for one coat work, but the whites were found to require two coats for good hiding.

The wallpaper had a red stripe in it and the red bled into all paints but the flat alkyd green. One of the commercial alkyd flat whites showed little bleeding. The rest were unsatisfactory.

Recoating and Adhesion

The recoating and adhesion characteristic of paint panels prepared one year ago showed that the adhesion and recoatability of latex paints were still quite satisfactory.

The latex paints were superior to the alkyd flats and the semi-gloss enamels in washability. All were good in ease of soil removal, but the latex paints neither dull nor polish with scrubbing, whereas the alkyd flats tend to polish, and the semigloss enamels tend to dull.

Solvency Characteristics of Low Odor Type Thinners

Golden Gate Club

This study was prompted by the increased use of odorless or low odor solvents in alkyd finishes, where they replace those of higher solvency. The viscosities of representative alkyd resins were determined by using an odorless solvent, a low odor solvent, a slow evaporating solvent and two standard types of thinners representing eastern and western type production. Resins used were the following:—

1. TT-R-226, type 1, Class A, 24 percent phthalic anhydride, glycerol, soya oil alkyd.
2. A similar resin replacing glycerol with pentaerythritol.
3. TT-R-226, type 3, 30 percent phthalic anhydride, glycerol, linseed oil alkyd.
4. A 35 percent phthalic anhydride, glycerol, soya oil alkyd.
5. An alkyd used especially in odorless type interior paints, 32 percent phthalic anhydride, glycerol, mixed vegetable oil alkyd.

Samples of all resins were taken at 100 percent solids from production batches, and reduced to 70 percent, 55 percent, 40 percent, 25 percent and 10 percent solids. Viscosities were determined at 77°F.

From this experimental work the following conclusions were drawn:—

1. With 24 percent phthalic anhydride resins, eastern and western solvents yield solutions of approximately equal viscosity. The low odor and odorless thinners give solutions of higher viscosity, but at concentrations normally employed; for example, 40 percent solids probably have little effect on the resulting viscosity of a finished product.
2. With resins of 30 percent phthalic anhydride, the lower viscosity resulting from the greater solvent power of the western type thinner is very evident at resin concentration of 55 percent or higher, becoming negligible as the solids are reduced to 40 percent. The low odor and odorless types of thinners yield considerably higher viscosities at all resin concentrations tested.
3. Thinners of the slow evaporating types yield solutions of higher viscosity than might be expected from their indicated solvent power, the increase being more apparent at resin concentrations above 30 percent.
4. The stability of solutions of 30 percent or higher phthalic anhydride content resins in odorless type thinners is questionable at solids contents of 25 percent or lower.

Vehicles and Pigments in High Heat Resistant Coatings

Houston Club

In the previous year, the Houston club established that in comparison with other heat resistant vehicles, silicone resins outperformed other standard film formers on the market. In this year's work, new silicones recently developed were found to be better than those with which experimental work was done last year. In addition to the new silicone vehicles, two butyl titanates were also evaluated.

Evaluations were made as clears, and as pigmented finishes pigmented with such various ceramic colors as cadmium selenium red, chromium oxide green, chrome copper manganese black, ceramic black, cadmium yellow, cobalt alumina blue, calcined yellow iron oxide, precipitated yellow iron oxide, precipitated black iron oxide, cadmium orange and titanium dioxide. Since these color tests were made to evaluate the effect of color, a single silicone resin vehicle was used.

Pipe Stand Test Method Used

The usual pipe stand method of testing was employed. Paints conforming to the standard pigmentation of the Houston club were made, and also pigmentation of aluminum and aluminum-zinc dust recommended by manufacturers were included.

Test data disclosed that the two new silicone resins introduced as heat resistant vehicles this year were improvements over vehicles previously available. Rapid hydrolysis of the butyl titanates resulted in erratic results, necessitated special care in application and were not as satisfactory as the silicones. One of the new silicones performed the best both in aluminum-zinc dust formulations and in the club standard formulation. A definite correlation between clear film and pigmented film performance was established, so that a test on clear vehicles was felt indicative of what could be expected from pigmented films, and represented a short-cut method of test.

Color Test Results

Color test results indicated that pigmentation of the clear vehicle had no adverse effect on any given vehicle, but that the colors seemed to do no better than the silicone resin in which they were dispersed. With the exception of the two precipitated iron oxides, all the heat resistant colors showed promise up to 700°F. The precipitated iron oxides showed color change to red, in the range of 500°F. Cadmium yellow turned reddish at 400°F. and above, but resumed its original color on cooling. The performance of all of the colored finishes, with the exception of the red cadmium selenium color and cadmium yellow, was upgraded by the use of a primer coat of the standard club formulation. The most outstanding heat resistant colors were cadmium selenium red and chromium oxide green.

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N. D. Agricultural College Reports on Technical Study

A technical paper on "The Protectometer and the Evaluation of Anti-Corrosive Primers" was presented at the federation meeting by Marvin A. Danforth, H. E. Larson and Weuter Bosch of North Dakota Agricultural College. A summary of the report follows:—

Established methods of testing metal primers involves a first stage of preliminary or screening tests a second stage of panel exposure tests, and a third stage of field tests. Preliminary testing involving such things as salt spray cabinet work, weatherometer tests, water permeability, etc., are designed to cut down the necessary work in the second and third stage of testing.

Lab Tests vs. Field Exposure

Unfortunately, there is much to be desired in the way of correlation between laboratory accelerated testing methods and results obtained in panel and field actual exposure tests. In addition to this, ratings are arbitrary and leave from for wide human error. For this reason, Bacon, Smith, and Rugg devised the protectometer, based on the theory that the metal protective characteristics of a film are dependent upon and directly proportional to the electrical resistance of that film. Measurements are made of the internal resistance of a metal-coating-aqueous environment-mercurous chloride/mercury electrochemical cell, and a plot is made of the resistance versus time as the coating is destroyed by sea water immersion.

In this paper attempt was made to adapt the protectometer to the evaluation of metal primers, subjected to salt spray breakdown, and thus eliminate the human error in reading the results. ASTM salt spray cabinet methods of test were followed. It was generally found in testing hundreds of paint films with the protectometer that an electrolytic resistance greater than 10^8 ohms afforded good protection, while poor protection was obtained with coatings which had resistances smaller than 10^6 ohms.

Primers tested in the present work covered by this paper, consisted of zinc chromate/mica pigmentations of such vehicles as vinyl chloride resin, chlorinated rubber/chlorinated hydrocarbon combinations, two long oil alkyd resins, and a twenty-five gallon oil length para-phenol resin varnish made with linseed oil.

Factors in Metal Protection

Important factors in metal protection were found to be film thickness and vehicle composition. Best anticorrosive results were obtained from the vinyl resin vehicle and one of the long oil alkyd resins. Chlorinated rubber primer broke down early, and the other alkyd resin and phenolic varnish primers were intermediate.

It was concluded that the life of an anti-corrosive primer coat can be fairly well predicted by its behavior in a salt spray cabinet, as measured accurately by determining its electrical resistance at various intervals. The influence of pigment volume concentration on resistance to corrosion, seemed to be of quite significant importance in thin films and progressively less important as film thickness became heavier than two mils.

Mattiello Lecturer Discusses Film Properties

Dr. Adolf C. Elm of the New Jersey Zinc Company, New York, delivered the Joseph J. Mattiello memorial lecture for 1953. Dr. Elm discussed "Some Mechanical Properties of Paint Films," and gave particular stress to the influence exerted by pigments in the film on these properties.

He explained that the mechanical properties he was referring to were only those concerned with mechanical forces within the film itself, utterly independent of the film's relationship to the substrate or surface on which it might be applied. Primarily, he said, these mechanical properties consist of film strength and film distensibility.

Methods used in the study involved work with films which were detached from their surface and aged under carefully controlled standard conditions of temperature and relative humidity, it was stated. Stress-strain data were determined under the same conditions of temperature and relative humidity on the usual type of equipment used to measure tensile strength and elongation, but equipped to plot elongation against load continuously. Dr. Elm pointed out that in analyzing data so obtained it should be borne in mind that they represent only a small sector of the complete stress-strain diagram, and that injudicious extrapolation of curves can lead to serious error.

Constant Stress

Paint film stress-strain diagrams are usually a combination of elastic deformation and plastic deformation, it was indicated, as these two phenomena occur more or less together. Elastic deformation occurs when a load is applied to a paint film, the speaker said, and it stretches in proportion to the load, although, he noted, the load is not so great or of such duration that the film cannot return to its original shape. Plastic deformation, on the other hand, is a permanent deformation of the film from its original shape, resulting from the load applied to the paint film having been too great and of too long duration, Dr. Elm declared

The elastic response of a film is instantaneous and proportional to the load, he continued, whereas the plastic response is delayed to a degree during the stretch, depending upon the internal viscosity of the film matrix and its ability to yield under stress by a mechanism of flow.

Elongating Film Under Increasing Pull

When a film is being elongated under a pull of increasing load, prolonged over a sufficient period of time so that plastic flow of the film matrix occurs, Dr. Elm said, it should be remembered that the cross-section of the film will at a finite, but steadily increasing, rate be reduced. The result is that the true load per unit of cross-section at any moment, therefore, increases steadily in the course of the experiment. Accordingly, it was indicated, a straight line relationship can be obtained only when the logarithm of time is used as a measure of the change in cross-sectional area, or load per unit of cross-sectional area is plotted against elongation.

Practical aspects of fundamental studies based on these mechanical properties might result when it is taken into consideration that coated articles are piled together frequently for long periods of time, he stated, adding that marring, sticking and film imprinting may well be found to be related to the resistance of a paint coating to flow or creep under static stresses.

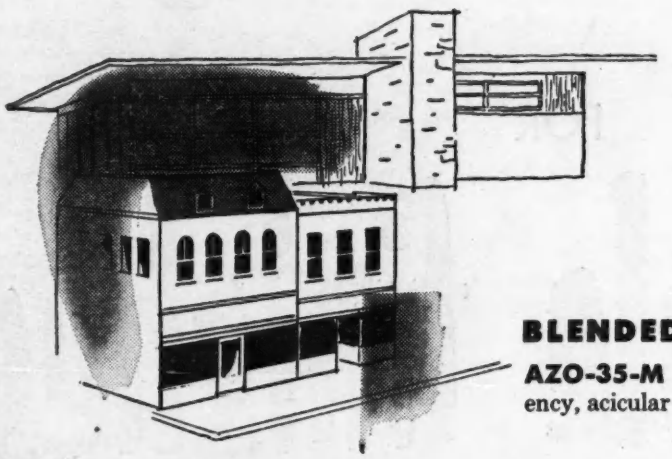
Dynamic Stress

One of the common oversights of investigators in making stress-strain tests, Dr. Elm asserted, is that they express stress in terms of load per unit cross-section at the beginning of the experiment, which is an oversimplification. When an attempt is made to relate the observations made to the internal or molecular structure of the film, he said, it is imperative that the shrinkage of the cross-sectional area of the specimen at an ever-increasing rate, as the experiment progresses, be taken into consideration.

In order to obtain an absolutely correct picture of the elongation process, the speaker pointed out, a means for measuring the instantaneous width and thickness of the test specimen continuously while it is being stretched to varying degrees at varying times is necessary. Perhaps this could be done effectively, he suggested, by synchronizing a high speed motion picture camera with the elongation process.

Effect of Rate of Loading

Since the deformation of a paint film under the influence of externally applied stress is partially elastic and partially plastic, and the plastic flow deformation requires some finite time to develop, it follows, Dr. Elm said, that the plastic deformation will have less and less of an



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effect in the total film deformation, as the speed with which the film is loaded increases. Accordingly, the percentage of elongation approaches a limiting value as the rate of loading approaches infinity, and this limiting value is related to the elastic distensibility of the film under test.

Like all properties of paint materials which are a function of the film's plasticity, film distensibility changes with temperature, it was emphasized. Hence the importance, in stress-strain measurements, of taking great care that investigations for comparative study are made under controlled temperatures within narrow limits of the test specimens, the equipment and their surroundings.

Effect of Humidity

Since all paint films, some much more so than others, have a tendency to absorb moisture and to swell, and in this swollen state become more distensible and weaker than when dry, Dr. Elm cited humidity as one of the most important external factors to control in making stress-strain measurements.

It is a widely understood and acknowledged fact that paint coatings under exposure progressively lose distensibility and gain strength on aging, he said. This aging effect proceeds at a very fast rate early in the film's life, and then tapers off to a rate which is hardly measurable. The relationship of the aging reactions are logarithmic and data can be plotted as a straight line function on a logarithmic scale. From this, he indicated, it is obvious that the conditions under which a paint film is aged exert a tremendous influence upon the rate and degree of distensibility loss. Accordingly, conditions under which the film ages, and the duration, must be carefully standardized and controlled, and stated every time aging data are presented.

Effect of Pigmentation

Perhaps the greatest influence upon the mechanical properties of an organic film is exerted by its pigmentation, it was stated. As the pigment volume concentration increases, the film loses distensibility and gains in stiffness and strength.

When the work done by a load on the pigmented film is plotted against the pigment volume concentration, Dr. Elm continued, distensibility drops very sharply to a certain point, beyond which there is a less steep drop in distensibility. This point of notable break in the curve, it was observed, corresponds with the pigment volume at which quite unrelated studies have demonstrated that optimum exterior durability is obtained. While Dr. Elm made no claim that the results of limited experiments established the durability-distensibility relationship unequivocally, it would be a great help to the industry, he said, if further investigation established this principle beyond doubt, since it would open the way to a new approach to the problem of improving the durability of paint systems.

Effect of Particle Shape

It is an established fact from past experience that regardless of substrate, paints made with certain nodular shaped pigment particles eventually fail by crowsfooting, no matter how applied, whereas acicular pigmented films fail by crowsfooting when sprayed, but by line cracking when brushed, Dr. Elm asserted. This was determined, he went on, by x-ray diffraction studies to be due to a high degree of orientation of acicular particles in the film in the brushing direction belonging to the basal plane of the pigment particle, while pigment particles normal to the brushing direction were the sides of the crystal. Nodular shaped particles, on the other hand, he revealed, showed no orientation tendencies, but random distribution.

These facts suggested experiments designed to study stress-strain relationships on similarly prepared films, it was said. Brushed films were studied on pigmentations with nodular shaped pigments, and the film stress-strain measurements made first in the direction of application, and then in the direction perpendicular to it. No significant differences were noted. When this same procedure was applied to films pigmented with acicular shaped particles, elongation appeared to be unaffected, but the film strength was definitely greater parallel to the direction of application.

Stress-Strain of Acicular Particles

Two possibilities explaining this were offered. One that solid particles in the film could interfere with the distribution of the strains in the pigmented matrix and cause them to be concentrated in certain areas, or that there could be rather marked differences in the strength of the bond between the matrix and the various crystal faces. Further investigations were felt warranted by the speaker to determine the exact nature of this relationship.

The pigment surface seems to be the source from which emanates the forces affecting the behavior of pigmented films, he said. Two properties of pigment surfaces are of prime importance in this connection, he indicated, citing the extent of the pigment surface exposed to the matrix (area) and the chemical and physical activity or inactivity of the pigment surface.

So far as the influence of article size is concerned, he stated, stress-strain measurements indicated a consistent, but not very great, influence on distensibility, its influence being relatively less than some of the other factors.

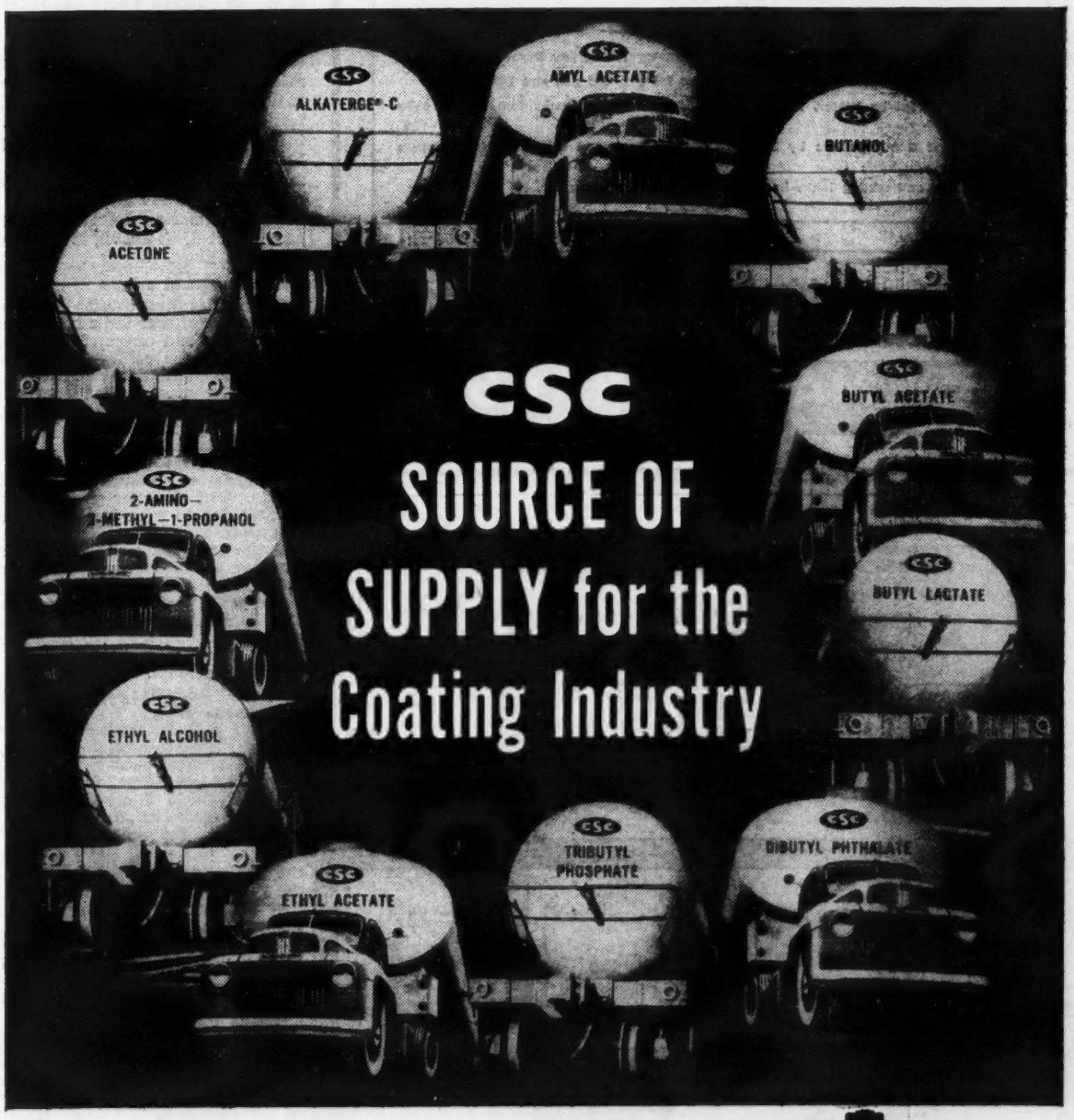
Films pigmented with zinc oxide and with titanium dioxide, which vary little in particle shape but markedly in chemical activity, were studied for stress-strain data to show the effect of chemical surface activity. Dr. Elm reported. The distensibility curves of zinc oxide film flatten out more rapidly with increasing pigment concentration than do those of titanium dioxide films.

In the case of the inactive titanium dioxide film, the stiffness of the paint film increases normally as would be expected, as pigment volume increases, due to the increase of interfacial area. The chemically active zinc oxide paint films, on the other hand, he said, exhibit a sharp rise in stiffness for the first few percent of [illegible] and then go into a more normal type of curve illustrative of greater [illegible] from interfacial effects.

Mechanical Properties vs. Film Structure

Knowledge of high polymer chemistry shows that protective coating film consist of densely cross-linked structures which are formed in the course of the drying process from partially polymerized vehicles by oxygen induced or thermochemical polymerization, the speaker contended. The majority of these are randomly arranged polymer units held together by a variety of forces. Under normal conditions, he said, individual chain segments are probably coiled to varying degrees. When such a system is subjected to external stress, the coiled segments tend to uncoil and, so far as possible, become aligned in the direction of the stress.

Various chain segments making up a film probably are coiled in varying degrees ranging from the extremes of completely extended to completely coiled, it was noted. In addition, a fair percentage of segments are prevented from coiling by cross-link ties and steric hindrance of side groups. A good portion of segments are



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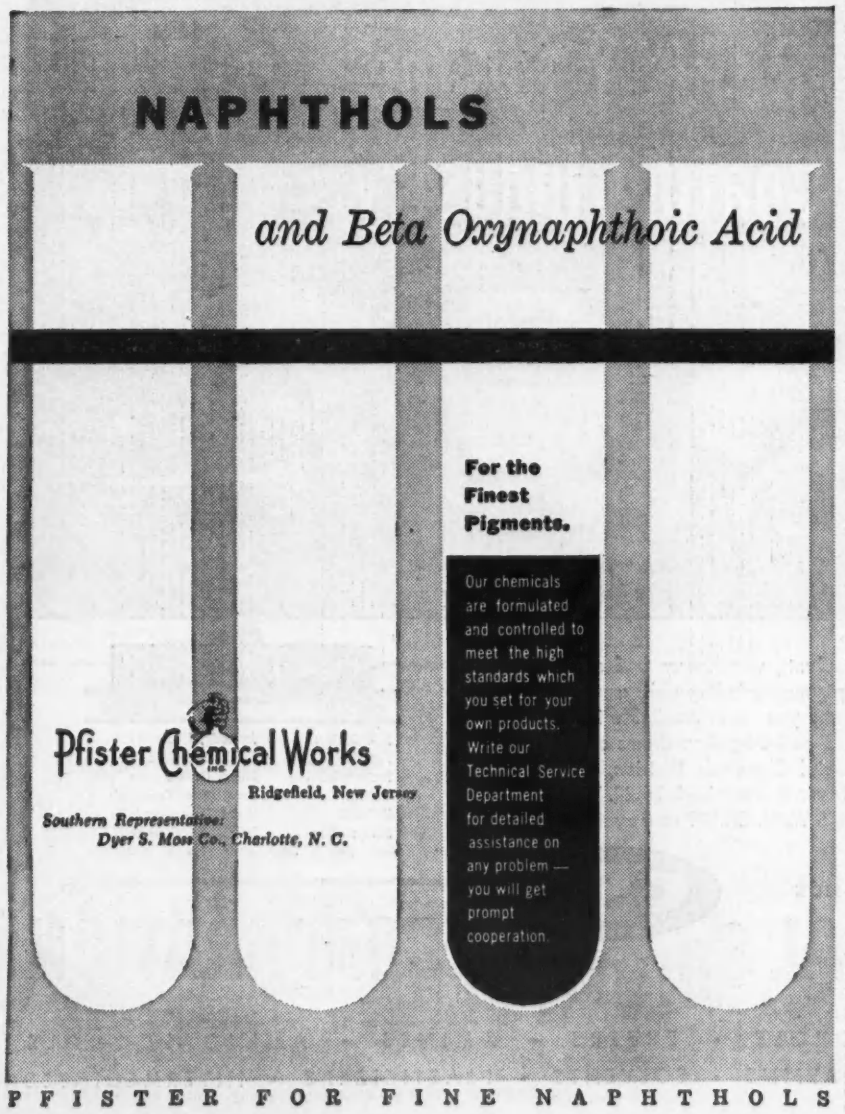
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also arranged at varying angles to stress that might be put upon them at any point.

Under these conditions, the speaker held, experience would tend to indicate that considerably less than half of the elongation of a film can be ascribed to elastic deformation. When the external stress applied to a film is great enough and of sufficient duration, he said, plastic deformation will take place. In this, plastic flow occurs in which certain individual polymers will begin to slip past one another, and will not slip back; hence the deformation is permanent. This plastic flow, as in the case of viscous flow, it was stated, depends upon the magnitude of the force and the duration of time which it is applied. Also, as in the case of elastic flow, plastic deformation will be greatly decreased as the polymer units are bound together by more cross-linkages or other binding forces.

Bond Forces

Stress applied large enough and long enough will result in rupture of the film, Dr. Elm declared, adding that the rupture could involve breaking either primary or secondary bonds. If, theoretically, the polymer formation could be a polymerization so controlled that the film was composed on only a single large molecule, then film rupture would consist of breaking primary bonds. However, data on primary bond strength shows that it is several times the secondary bond strength, he said, and experimental values obtained indicate that there is little doubt that tearing of the paint film involves the rupture of a significant number of primary bonds. The very great strength of primary valence bonds affords a reasonable explanation of the great increase in film strength resulting from relatively small amounts of cross-linking in baked or thermo-cured films.

Secondary Bond Forces

Since paint films consist largely of large number of polymer units held together by secondary bond forces, theoretical film strength can be estimated from heats of vaporization, but these calculated strengths are usually greater than encountered in practice, it was noted. The stronger secondary bond forces emanate from such polar groups as hyroxyl, hydroperoxyl and carboxyl points on the chain. Weaker bonding forces are such factors as mol cohesion. Not all polar groups present are reacted due to such inhibiting influences as moisture associated with polar groups and the increasing decline in molecular mobility as polymerization reactions proceed. The length of side chains force larger chain segments apart and make for easier slip of one polymer over another under stress. Hence the longer the side chains, the more sharply will tensil strength decrease.

Into this compiicated film structure with its various forces making for varying strength and distensibility, the introduction of pigments complicates the picture, Dr. Elm pointed out. A pigment particle may add to, substract from, or leave unaffected vehicle film strength, depending upon the forces of attraction between the pigment and the film binder.

In the case of pigments not wetted by the vehicle, or low adhesion strength of the vehicle to the pigment surface, he said that the pigment particle will act like so many flaws in the film and weaken it. Where the adhesion tension of the matrix to the pigment surface is equal to or greater than the cohesion of the matrix itself, the film will be strengthened.

Reactive Pigments

Chemical activity of pigments in which there is reactivity between pigment and vehicle generally leads to metallic soap formation, it was explained. The function of these soaps in film properties has been widely speculated upon and claims made ranging anywhere from no effect to the claim of total effect in film reinforcement by reactive pigments.

If the soap existed as a separate particle or crystal, he concluded, it would be merely another particle of solid, and so numerically lower than pigment particles as to be essentially negligible in effect. If the soap dissolved in the matrix, or became colloidally dispersed in it, again it could hardly be expected to increase film strength of the secondary forces holding the film matrix together in its polymeric network, Dr. Elm contended. If, on the other hand, soap formation in its broadest sense is considered, namely the reaction of a metal ion with an organic radical, it is conceivable, he allowed, that metallic ions from the pigment might react with carboxyl, hydroperoxyl or other polar groups in the film matrix to form short primary linkages helping to tie polymer segments together and thus increase their total film strength.

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Manufacturing Group Tells of New Equipment

The federation's manufacturing committee, headed by Morris C. Slack of Dean & Barry Company, Columbus, Ohio, and a member of the CDIC club, had the following to report for 1953:—

The scientific section of the National Paint, Varnish and Lacquer Association is introducing the Shurts High Speed Stone Mill which involves new principles in design and operation. The stones are so shaped and constructed that the paint material is continually being thrown back instead of being impelled through by the rapidly moving rotor stone. Counteracting this centrifugal force applied by the rotor is a variable external force which feeds the paint on through the mill. In this process the larger masses of undispersed pigment are being continually returned through a relatively weakened or non-tack vehicle for continued and repeated dispersing and wetting action while the finely dispersed particles are forced on through the mill. By this means production rates of quality grinds are greatly increased.

Colloid Mill

Chemicolloid Laboratories, 30 Church street, New York, has found that its Charlotte Colloid Mill meets the rigid requirements necessary for the efficient processing of latex emulsion paints. It is essentially a high speed mixer in which immiscible liquids and pastes are finely dispersed, disintegrated and emulsified through the action of its grooved conical rotor, rotating within a correspondingly grooved conical stator.

Increased production and minimum maintenance are the major attractions of a new type change-can post mixer offered by the Industrial Process Engineers, 8 Lister avenue, Newark, N. J. Its easily removable turbine agitator with pitched blade impeller and peripheral speed is designed for fast and thorough mixing. The entire drive assembly swings around its post. which is affixed to the floor and a wall or overhead beam, permitting it to be positioned over a number of cans.

Protectoseal's liquid transfer pump provides protection against explosion and fire hazards in the pumpng of hazardous liquids from receiving drums to containers. Three flame arresters have been built into the pump, being placed at points necessary to prevent explosion of vapors. The pump is self-priming and is constructed of special aluminum alloy with a brass telescopic tube. The manufacturer, Protectoseal Company, is located at 1920 South Western avenue, Chicago.

Explosion-Proof Lighting Fixtures

Crouse-Hinds Company of Syracuse, N. Y., has redesigned its EV Series of explosion-proof lighting fixtures to provide easier installation, maintenance and highest efficiency. It is especially recommended in areas made hazardous by concentrations of vapors including naphthas, alcohols, lacquer solvents and natural gas. This company recently announced its new type explosion-proof and dust-tight fluorescent lighting fixture, also for use in the presence of explosive gases or vapors. Each tube is housed in an individual tube of heat-resisting glass and the ends are reverse tapered and sealed into cast aluminum housings which contain the lamp receptacles.

A viscometer designed for polymerization and other processes found in the manufacturing of resins, bodied oils, paints, varnishes, lacquers, linoleum and plastics is now available from the Norcross Corporation, 247 Newtonville avenue, Newton, Mass. This instrument records the viscosity of the product on a twenty-four-hour chart and can be furnished with an alarm which can be adjusted to signal the proper termination point for the process.

German Made Turbo-Mill

A. E. Poulsen & Co., Los Angeles, is the exclusive distributor for a new German made turbo-mill which pulverizes, grinds, disintegrates and shreds an almost limitless variety of materials including chemicals, ores, limestone and pigments. This turbo-mill utilizes all four known principles of grinding and pulverizing (compression, impact, attrition, cutting and shredding) and in addition uses a new powerful richochet action.

Brighton Copper Works, Inc., 820 State avenue, Cincinnati, Ohio, has designed portable resin kettles of 250 to 750 gallon capacity. These compact, stainless steel kettles feature an explosion-proof motor to drive the turbine-type agitator, special oil seals, bearing construction which prevents grease and oil from entering the kettle, adjustable foam breaker, thermometer holder, reflux condenser and a charge hole. Inert gas is injected into the batch through the shaft and blankets the top by means of a valve.

A new type precision balance featuring a micrometer poise has been added to its line of precision products by the Ohaus Scale Corporation of Union, N. J. This unique poise enables the balance to be used over a range of 0 to 1,000 grams without additional weights and with a sensitivity of 0.5 gram. The scale has self-aligning bearings of agate and knife edges of precision hallow ground tool steel.

Barry-Wehmiller Machinery Company, 4660 West Florissant avenue, St. Louis, Mo., is the manufacturer of the Bruceway Marker designed for marking metal or glass containers after being filled with the product prior to shipment. Containers moving along a conveyor line rotate a pair of star-weels which in turn actuate the stamping wheel so that containers actually mark themselves.

A quick lock coupling for joining a mixer shaft to a motor shaft has been developed by Chemineer, Inc., 511 West Second street, Dayton, Ohio. One end of the coupling is bored, keywayed and setscrewed for connecting to the motor shaft, while the other end has a retainer ring and compression spring for holding the pinned end of the mixer shaft.

Bendix Aviation Corporation's Cincinnati Division is now producing an ultrasonic viscosity measuring instrument known as the Ultra-Viscoson. This consists of a small sensing element or probe that is immersed in the liquid under test together with an electronic computer. The Bendix Ultra-Viscoson measures viscosity by exciting a thin alloy steel blade on the end of the probe with a short electrical impulse. This produces ultrasonic shear waves in the material surrounding the blade, causing layers of the material to slip back and forth. Readings are instantaneous and viscosities can be determined in processes where temperatures range from minus 190°F. to plus 650°F.

Pail Handling Equipment

The Pailtrucker was designed especially for handling straight-side or flare type five gallon pails. It is light, easily maneuverable and allows cans to be stacked in tightly packed rows. One man can pick up, transport and stack five five gallon pails at one time. Pailtruckers are distributed exclusively by the Roman Company, 6312 Kinsman road, Cleveland, Ohio.

A capping machine of the automatic type has been developed by the Upressit Products Corporation, 420 Lexington avenue, New York. This machine applies caps or closures to bottles or cans, and then applies a tamper-proof metal band that is crimped in places and scored so that it can be easily torn off.

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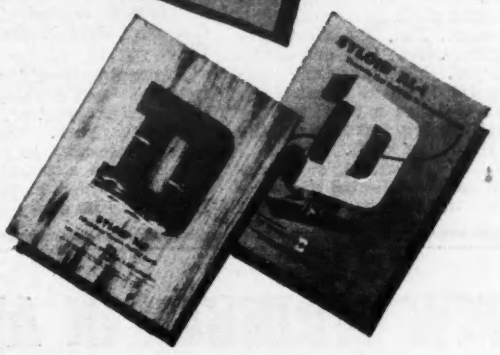

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Paint Industries' Show Features Plastic Auto

Display of a new Chevrolet Corvette sports car, with a body made from Monsanto Chemical Company's polyester resin, was the standout feature of the 1953 Paint Industries' Show, held October 27 to 30 in conjunction with the FPVPC and NPVLA meetings.

The automobile body, molded by the bag process, was finished after formation with a special primer or undercoat and with regular automotive topcoats. The motor was of the regular Chevrolet Bel Air type, having three carburetors. However, it was charged up to 160 horsepower, which, together with the lightweight plastic body, made for startling performance.

Monsanto's booth in the paint show featured a styrene latex vehicle system for use in exterior masonry paints, and a new resin—"Polymer C-3"—which is a modified vinyl acetate type of material.

Aluminum Silicate Pigments

Edgar Brothers Company, Metuchen, N. J., exhibited its line of aluminum silicate pigments, some of which were used in the Chevrolet Corvette body as a packing or filling agent to prevent shrinkage of the plastic on removal from the mold. With these pigments, it was noted, undercoats can also be formulated for application to the resin body, thus eliminating the need for first sanding the surface to obtain adequate adhesion. Also demonstrated were new developments in using the pigment in metal primers, particularly zinc chromate primers of the aircraft type, to produce higher gloss of subsequently applied topcoats. In addition, its use in alkyd resin and latex finishes was shown.

General Electric Company, Pittsfield, Mass., showed its general line of paint raw materials, with particular stress on its alkyd resin, "Glyptal 7307," for use in the so-called four-hour enamel line of paint manufacturers, which, however, gives actual drying times of two and a half hours. GE also displayed its "Glyptal 7330" for use in alkyd flat finishes. Other items of interest were its methylon resin for the production of heat-resistant finishes and a complete line of silicone resins.

Vinyl Toluene as Modifier

Dow Chemical Company, Midland, Mich., featured its new monomer, vinyl toluene, which, according to the company, is used for modifying vegetable drying oils and alkyd resins to obtain chemical and physical characteristics not previously obtainable with these types of finishes.

Along with its regular line, Pacific Vegetable Oil Corporation, Los Angeles, exhibited its new conjugated safflower drying oil, having 22 percent diene conjugation. This leads to certain technical advantages in polymerization and drying time, and in film resistance characteristics, it was pointed out.

Godfrey L. Cabot, Inc., Boston, showed its new non-metallic mineral, "Wollastonite," which, it was said, can be used in both interior and exterior paints and provides high pigment volume finishes with a uniform angular sheen and film resistance to marring and polishing. Among the scenting agents and odor masks exhibited by Polak & Schwarz, Inc., New York, was its "Odormasque LBP" for latex paint systems.

Shell Oil Company, New York, in its exhibit highlighted its new alkyd reduction technic, which, it was claimed, overcomes poorer solvency characteristics of the new odorless solvents. The method, it was added, can be adapted to regular type alkyd resins by the use of an additive, such as glyceryl mono-oleate.

New Pigment Yellow

Harshaw Chemical Company, Cleveland, Ohio, introduced a new pigment yellow, a calcined nickel-titanium dioxide for use in cases where extreme color permanence and alkali resistance is needed. Harshaw also showed its regular line of cadmium colors and stearates.

U. S. Stoneware Company, Akron, Ohio, displayed a line of "unitized" jar mills, porcelain ball mills and porcelain mill jars. J. H. Day Company, Cincinnati, Ohio, featured roller mills, pony mixers and paint mixers. Archer-Daniels-Midland Company, Minneapolis, Minn., in its exhibit featured some new odorless vehicles for interior finishes, fatty acids, fractionated marine oils and vinyl plasticizers.

Troy Engine & Machine Company, Troy, Pa., showed its Troy angular mixer, sixty-gallon size, with hydraulic tilting. Nuodex Products Company, Elizabeth, N. J., along with its standard line, exhibited "Nuosperse 657," a new type of wetting, dispersing and anti-settling agent.

Binney & Smith Company, New York, in addition to its line of high-color blacks and various dispersions of carbon black, displayed two new red oxides which it has

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CHAPTER OUTLINE

1. Outside House Paints
2. Color, Hiding, and Pigment Properties
3. White and Extender Pigments
4. Colored Pigments
5. Varnishes
6. Other Synthetic Resins
7. Latex and Water Thinned Paints
8. Interior Surface Treatments and Primers
9. Enamels, Metal Protection, Lacquers
10. Miscellaneous Finishes, Mildew Prevention
11. The Moisture Problem

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brought out since last year. Shell Chemical Corporation, New York, had a display showing some of the more important properties of "Epon" resin finishes.

U. S. Industrial Chemicals Company, New York, adopted the slogan, "Full Coverage," for its exhibit—full coverage of the paint manufacturer's resin requirements, whether he specializes in alkyd flats, latex coatings, or both. American Cyanamid Company, New York, dramatized the properties and values of finishes made with its line of resins.

Half-Second Butyrate

Eastman Chemical Products, Inc., Kingsport, Tenn., demonstrated half-second butyrate and its use as a low viscosity film former in metal, wood, paper, cloth and plastic finishes, heat sealing adhesives and melt coatings. Sparkler Manufacturing Company, Mundelein, Ill., displayed its 18-15 varnish filter. Carbon Dispersions, Inc., Newark, N. J., had panels, charts and photographs illustrating the advantages of its "Black Shield" dispersions.

Bowser, Inc., Fort Wayne, Ind., exhibited a cut-away model of one of its "Xacto" meters. Cuno Engineering Corporation, Meriden, Conn., presented its full line of filtering and straining devices. Union Bag & Paper Corporation, New York, exhibited its "Unitol" brand of refined tall oils. Gardner Laboratory, Inc., Bethesda, Md., showed its line of automatic instruments for use in measurement of gloss, reflectance, color and other qualities of protective films.

Advance Solvents & Chemical Corporation, New York, along with its regular line of paint driers, specialty chemicals, paint fungicides and copper and zinc naphthenates, stressed its newer developments—Advance "Zirco" drier catalyst and rare earth driers. Bakelite Company's exhibited featured low-cost phenolic resins for varnishes, vinyl acetate resin latex paints for interior wall finishes and a variety of products using Bakelite resin-base compounds.

Witco Chemical Company, New York, presented its complete line of naphthenate, octoic, odorless and tall oil type driers; metallic stearates and other special metallic soap type gelling agents; plasticizing esters of the fatty acid, phthalic, octoic and adipic types; and carbon blacks, precipitated calcium carbonates and asphaltic bases for pigmentation.

J. M. Lehmann Company, Lyndhurst, N. J., featured its model No. 631-V "Sight-O-Matic" vertical type high production three roll paint mill and No. 662-V "Sight-O-Matic" horizontal type three roll paint mill. Metals Disintegrating Company, Elizabeth, N. J., stressed the functions of aluminum and gold bronze pigments in protective and decorative coatings.

Nopco Chemical Company and Metasap Chemical Company, both Harrison, N. J., presented their complete line of latex paint antifoamers, latex paint thickener, latex paint adhesives and Metasap flatting and suspension agents. Paul O. Abbe, Inc., Little Falls, N. J., featured models of ball and pebble mills. Atlas Electric Devices Company, Chicago, displayed for the first time a new line of "Twin Arc Weather-Ometers."

Special Equipment Corporation, Greenwich, Conn., showed "Therm-O-Spray" heaters installed for use of several colors from the same air heater. Kinetic Dispersion Corporation, Buffalo, N. Y., exhibited a cut-away model of one of its sixty horsepower dispersion units. Hercules Powder Company, Wilmington, Del., showed, among other things, paints based on rosin amine that have fungicidal and bacterial properties; three hydroperoxides; ethylcellulose rubber lacquers, and chlorinated rubber-based maintenance paints.

Liquid, Crystalline Sorbitol

Atlas Powder Company, Wilmington, Del., displayed liquid and crystalline sorbitol for use in the synthesis of hard gums, varnishes and tall oil esters, and emulsifying agents for latex and alkyd resin emulsions. R-B-H Dispersions, Bound Brook, N. J., showed its line of black dispersions. Ross & Rowe, Inc., New York, displayed three products:—"Yelkin TTS," standardized lecithin for paint products; "R & R 449"' viscosity modifier, and "R & R 551" interface modifier.

Reichhold Chemicals, Inc., White Plains, N. Y., featured the various types of surface coating materials made with its resins and colors, stressing the promotional efforts on "Wallkyd" alkyd wall enamel vehicle. T. F. Washburn Company, Chicago, displayed its No. 3540 thixotropic alkyd. Carbola Chemical Company, Natural Bridge, N. Y., demonstrated its line of paint extenders.

Mineral Pigments Corporation, Muirkirk, Md., featured its new line of "Texturized" colors. Celanese Corporation of America, New York, emphasized the complete technical service it offers to paint, varnish and lacquer makers via its technical serice and application laboratory. Epworth Manufacturing Company, Detroit, Mich., exhibited its new standard unitized agitator drive for tanks.

Anderson-Prichard Oil Corporation, Oklahoma City, Okla., featured its line of solvents, thinners, asphalts and petroleum pitch for use in the paint industry. Pennsylvania Falk Chemical Company, Pittsburgh, Pa., had panels showing interior wall formulations using "Piccopale 100" resin emulsion, gold bronze formulations utilizing "Piccolastic" resins and aluminum coatings using "Piccoumaron" resins.

Cargill, Inc., Pittsburgh, Pa., exhibited "Falkyd Solution B-365," a pure alkyd for odorless flats; "Falkyd Solution BB-553," a pure alkyd for low odor flats; "Falkyd Solution HH-7, a low cost non-penetrating alkyd for alkyd finishes; "Norlin L-70" and "S-70," low temperature catalytically polymerized linseed and soybean oils, and the "Cargoil" series, new low cost barn paint oils.

C. K. Williams & Co., East St. Louis, Ill., had panels and technical data illustrating the applications of its new "Kroma" reds and its "VVF" line of superfine iron oxides. Baker Castor Oil Company, New York, offered a general presentation of its products for the paint industry. Spencer Kellogg & Sons, Inc., Buffalo, N. Y., displayed its line of special linseed and soybean oils.

Coumarone Resins Shown

Neville Chemical Company, Pittsburgh, Pa., exhibited its complete line of coumarone and petroleum polymer resins along with shingle stain oils and aromatic and semi-aromatic solvents. Rohm & Haas Company, Philadelphia, devoted its display to the properties of "Rhoplex AC-33," its new acrylic emulsion for water paints.

Carbide & Carbon Chemicals Company, New York, presented data and displays of plasticizers and plastisols, cold-check panels on special low-temperature plasticizers, end-products and technical information on glycol maleates for polyester resins. Goodyear Tire & Rubber Company, Akron, Ohio, showed two of its chemical division products — "Pliolite S-5" and "Pliolite Latex 160 FR."

Fostoria Pressed Steel Corporation, Fostoria, Ohio, exhibited typical sections of various types of industrial infrared ovens, operating components of its new paint heating system and hot sprayed sheet metal parts. Chisholm-Hyder Company of Pennsylvania, Hanover, displayed its model V labeling machine. Rheem Manufacturing Company, South Gate, Calif., exhibited its "Rheemcote" fifty-five-gallon lithographed drum.

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Protective Coatings Materials

The market continued soft for some orange grades of shellac, as TN was reduced in price last week. Lemon No. 1 also underwent a narrowing of range. Superfine, reduced two weeks ago, held steady at new prices. Bleached grades were without change, as fair demand and good supply were reported. Although foreign lead market quotations were firmer last week, no changes in prices took place in this country for lead pigments. Cobalt oxide held steady after manufacturers advanced prices effective November 1. Nickel oxide, although off government allocation, was immediately put on allocation by producers, as there was still not enough to go around. The market for zinc pigments was said to be extremely quiet.

Figures compiled by the Tariff Commission for the production of synthetic resins showed a general increase in output for August. Government demand continued to play a major role in the buying and selling of ethylcellulose. One manufacturer lowered prices for polyethylene resins. Some shortages still existed, but were expected to be eliminated next January, when new facilities would add to the output. Customers steadily bought polystyrene, but in small quantities. Interest in vinyls was expected to pick up as toy manufacturing got underway for Christmas trade.

Some manufacturers still had not increased drum differentials on plasticizers by the end of the week. One manufacturer of dibutyl phthalate still held at old prices. There was no indication that listings would change. Tricresyl phosphate continued to move well, as did triphenyl phosphate. Prices for both materials stayed the same. There were no further changes in copal and dammar gums last week. The flurry of price adjustments two weeks ago was deemed necessary due to shortages at the source of supply, as well as strong buying from foreign markets. Domestic buying was still for immediate needs only.

Fillers and inerts were in their usual state of quietude. There was little if any significant activity in the market. Prices continued featureless, with average demand and good supply reported for most items. Soluble dried blood production was said to be more than adequate to meet present demand, owing to a usual seasonal trend. The undertone for imported casein was still unsteady last week, as domestic consumers had not as yet become a market factor. Most suppliers hoped for price reductions in the Argentine.

Price Trends

Advanced
None

Reduced
Shellac, TN, 2c. per lb.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 10, 1952
92.84	92.84*	90.23	88.43

*Revised.

(*For Current Prices see page 9*)

Prime Pigments

Antimony Oxide—The market continued the same as during previous months. Demand was steady, with enough stocks available to immediately furnish customers with all they needed. There were no price changes.

Black, Carbon—According to a report issued by the Bureau of Mines there was a 3 percent decrease in September production of contact carbon black below August. Total shipments of carbon black in August increased 17 percent. Exports in August dropped 21,000,000 pounds. The following figures are in thousands of pounds:—

Production

	Furnace	Contact	Total
August, 1953	99,250	36,914	136,164
September, 1953	93,422	35,295	128,717
September, 1952	80,975	42,349	123,324

Shipments

	Furnace	Contact	Total
August, 1953	80,439	33,488	113,927
September, 1953	86,997	42,265	129,262
September, 1952	83,132	37,662	120,794

Stocks

	Furnace	Contact	Total
August, 1953	143,911	243,903	387,814
September, 1953	150,336	236,933	387,269
September 1952	134,394	217,904	352,298

Exports

	Furnace	Contact	Total
August, 1953	11,745	9,608	21,353
September, 1953	*	*	*
September, 1952	8,475	14,476	22,951

*Not available.

Cobalt Oxide—The market was judged steadier after the price rise of 20c. per pound, effective November 1. Reserves were said to be adequate enough to keep up with present demand.

Iron Blues—Trade in these colors was quiet last week. Prices continued unaltered. Most producers told of comfortable backlogs. Consuming demand was average.

Lead Pigments—Although foreign markets in lead metal were firmer last week, little or no change in the status of most pigments occurred. Lead monosilicate was thought to be moving to average demand, the same situation was reported for blue basic sulphate and red types. Orange mineral underwent no changes in price. Stocks were considered more than adequate to meet present consumer needs.

Nickel Oxide—Although taken off government allocation lists, this pigment was placed on an allocation basis by most producers. Although it was generally agreed that the supply situation was better, shortages were said to exist in certain areas. Demand was average. There were no changes in quotations.

Phthalocyanin Toners—Normal market conditions were reported for both green and blue types. Prices held at previously established levels. Demand continued at a steady volume. Stocks were available to fill all needs.

Ultramarine Blues — Price schedules were stable last week. According to one observer, demand moved in the same pattern it has followed over the past four or five years. Present production and stocks were able to keep up with existing call. It was believed by some that other pigments with superior characteristics would in the distant future encroach on demand for ultramarine pigments. However, it was pointed out that color characteristics as yet could not be duplicated.

Yellows—Current prices for benzidin AAA and AAOT were steady and unchanged. Cadmium CP and cadmium lithopone were also without change. CP chromes and Hansas retained the same listings. Most producers said they had plentiful supplies. Incoming orders were being promptly filled.

Zinc Pigments—Trade was judged extremely quiet during the week. No prices were changed. Demand was such that producers could furnish users with all they required.

Synthetic Resins

The following production information comparing July and August output in pounds, was supplied by the Tariff Commission.

Production

	July	August
Phenolic and other tar acid resins:—		
Laminating resins	7,184,781	7,633,348
Adhesive resins	1,382,752	1,535,893
Protective coating resins, unmodified, modified except by rosin	2,053,313	2,281,904
Urea and melamine resins:		
Adhesive resins	7,351,629	7,073,612
Protective coating resins, straight, modified	1,897,647	2,224,768
Styrene resins:—		
Protective coating, resins, straight, modified	5,963,923	6,533,195
Vinyl resins:—		
Total, all types	40,392,090	43,591,858
Alkyd resins for protective coatings:—		
Phthalic anhydride types unmodified	20,292,896	18,621,435
Modified with tar acids, rosin and or other materials	8,789,166	7,945,296
Polybasic acid types except phthalic:—		
Unmodified	1,099,038	1,111,389
Modified with tar acids, rosin and or other material	695,433	645,546
Rosin modifications for protective coatings:—		
Rosin, rosin esters, unmodified (ester gums, etc.):—		
Esterified with glycerol	1,342,895	1,422,015
Esterified with other alcohols	1,690,550	1,437,542
Rosin, rosin esters, modified:—		
Modification with phenolic and other tar acid condensates	1,435,436	1,525,352
Modification with maleic and fumaric acids	2,780,094	2,542,459
All other modifications	3,306,373	2,471,308
Coumarone-indene and petroleum polymer resins	10,614,842	13,671,774
Miscellaneous synthetic plastic and resin materials:—		
Protective coating resins (including epichlorohydrin, acrylic, polyester, silicone and other resins)	921,345	604,672

Ethylcellulose — Government applica-

For Late Market Developments, See Page 4

tions continued to be heavy, accounting for the major share of sales during the week. Demand in general was thought normal. The supply position was judged excellent. Prices remained unchanged.

Phenolics—Incoming orders continued in large volume. Manufacturers reported that enough material was on hand to promptly fill consumer needs. Quotations were steady through the week.

Polyethylene—One company lowered prices on these resins by 3c. per pound last week. It was the third price reduction in a little more than one year. One observer pointed out that price cuts were possible due to expansion of production facilities, and increasing economy in manufacture. Supplies were still tight, but new facilities due to go into production in January, 1954, were expected to produce enough material to go around.

Polystyrene—Steady buying in small quantities characterized trade. Business was regarded as slow in some quarters. However, it was noted that in the overall picture, sales were running ahead of last year. The peak season was expected soon, as consumers in the toy industry bought for Christmas trade. Present stocks were thought ample enough to satisfy all wants. No price schedule revisions took place.

Vinyls—Interest in these resins continued to broaden. Through active research and development, more applications were being found daily, it was pointed out. Supplies were generally caught up to demand. Buying interest continued well sustained. There were no alterations in prices last week.

Lacquer Materials

Dibutyl Phthalate—A price range still existed for drums in carlots and less carlots last week, as at least one producer still held at ¼c. per pound under the general level established by most manufacturers some weeks ago. The Tariff Commission announces that 1,975,920 pounds of dibutyl phthalate were produced in July, whereas output in August totaled 1,967,793 pounds.

Diethyl Phthalate—The Tariff Commission reports that 1,358,118 pounds were produced in August, as compared with 1,577,231 pounds manufactured in July.

Tricresyl Phosphate—Material continued to move well to a large volume consumption. No shortages were reported. Prices held without change. The Tariff Commission reports that 2,102,130 pounds of TCP were produced in August, as compared with 1,637,420 pounds manufactured in July.

Triphenyl Phosphate—Prices continued without change, carlots of barrels selling at 39c. per pound and less carlots going for 40c. per pound on a freight equaled basis. Demand was thought steady, with enough supplies on hand to take care of present incoming orders.

Natural Resins

Copal Gum—Manila DBB and Philippine pale chips continued firm, both selling at the 18c. to 19c. range set last week. Some items were still in rather short supply, but it was agreed that for the most part, consumers could obtain what they needed. Buying from Europe and Japan continued heavy, while in this country, trade operated on a hand-to-mouth basis, as customers were reluctant to buy ahead.

Dammar Gum—All types were considered firm in price, although no advances took place last week. Foreign markets were strong. Domestic demand was limited to buying for immediate needs. Most suppliers felt that stocks were adequate.

Shellac—The market for orange grades continued easy, with TN currently selling for 32c. per pound. Lemon No. 1 sold at a flat price of 39c., the 1c. range being eliminated. Calcutta markets were judged firm, however. It was said that holidays both here and at the source of supply had dampened business to some extent. Bleached grades continued unchanged in price, with the general market picture in the firm classification. Supplies were ample enough to satisfy incoming orders.

Miscellaneous Materials

Blood, Dried, Soluble—Prices for this adhesive ranged from 16½c. to 18c. per pound, in carlots. Current listings for quantities in less carlots ranged from 17½c. to 25c. per pound. Production was said to be out ahead of demand, in accord with a seasonal trend. Ample supplies were on hand to meet consumer needs.

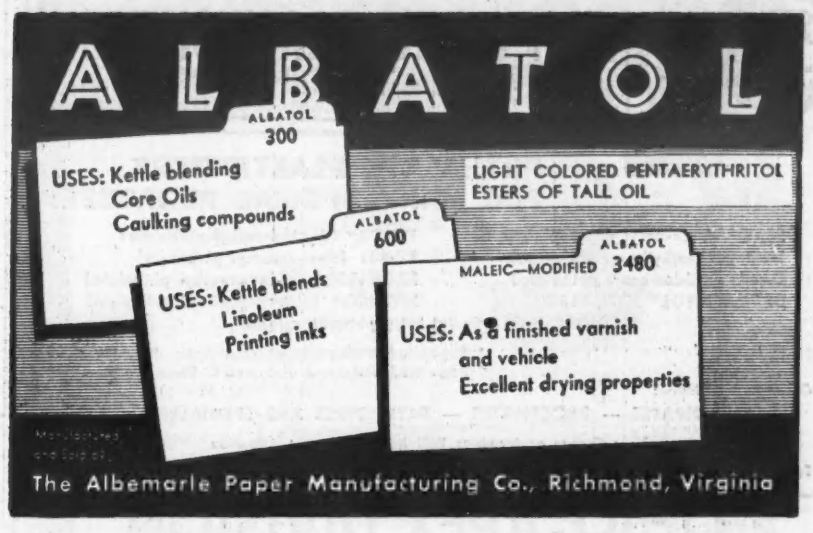
Casein—Consuming mills continued to hold out as prices held unsteadily at 21¾c. to 22½c. per pound for Argentine material. One source said it was too early to tell whether or not the Argentine would lower prices. Some quarters expected lower listings as production in that country got underway in full swing. The New Zealand peak production season was expected to shade prices downward here for casein imported from that country. Prices for domestic casein remained unchanged, with little or none available.

Synthetic Adhesives—The following information comparing July and August consumption and stocks is related to the softwood plywood industry and comes from Bureau of Census figures. The table is expressed in pounds, on a dry basis.

	Consumption	
	August	July*
Casein glues	342,000†	223,000
Soybean glues	4,531,000	5,205,000
Urea resin glues	288,000	355,000
Pheonlic resin glues	2,040,000	2,468,000
Other glues	571,000	545,000
Totals	7,772,000	8,796,000
	Stocks	
	August	July*
Casein glues	205,000‡	159,000
Soybean glues	2,956,000	3,083,000
Urea resin glues	268,000	229,000
Phenolic resin glues	1,523,000	1,437,000
Other glues	464,000	243,000
Totals	5,416,000	5,920,000

* Revised.
† Figures allow 11 percent for consumption.
‡ Figures allow 28 percent for stock.

Tallates—Producers felt that output was sufficient enough to satisfy consumer needs last week. Steady demand was reported. No changes in price took place,



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and the industry did not expect to alter listings in the near future.

Fillers and Inerts

Blanc Fixe—Direct process material continued at old prices. Trade was quiet during the week. There was plenty to go around.

Naval Stores

Rosin—The Bureau of Agricultural Economics reports that total gum and wood rosin production for September was 155,100 drums of 520 pounds net. This figure represents a decrease of 2,870 drums under production for August. Some 147,530 drums were produced in September, 1952, and 153,730 drums were produced in August of that year. Production from April 1 to September 30, 1953, amounted to 296,160 drums. Total production during the comparable period last year was 938,430 drums.

Stocks at the end of September totaled 852,870 drums, an increase of 3,780 drums over August supplies. September, 1952, reserves totaled 818,010 drums, with August stocks for that year amounting to 806,040 drums.

Turpentine—The Department of Agriculture reports that 47,030 barrels of 50 gallons each were produced during September. This figure represents a decrease of 3,020 barrels under output for August. Turpentine manufactured during the period from April 1 to September 30 totaled 296,160 barrels, or a decrease of 31,000 barrels under figures for the comparable period in 1952.

Production during the first half of the naval stores crop year was reportedly 18 percent less than for the corresponding period in 1952.

Stocks of gum and wood turpentine in September totaled 180,940 barrels of 50 gallons each. August stocks were reported to be 179,710 barrels. September 1952 stocks totaled 180,770 barrels, while August supplies for that year were 175,220 barrels.

Rosin, Gum
(USDA, per 100 lbs.)

	Fri.	Mon.	Tues.	Wed.	Thur.
Drums—					
I	...	...	...	$7.80	...
K	$7.70	...	...	...	...
M	7.70	$7.70	$7.75‡	...	...
N	...	...	7.75	...	$7.75
WG	...	7.74	7.78	7.925‡	...
WW	7.90‡	7.835‡	7.93	7.85	7.93
Bags—					
K	7.60	...	...	...	7.65
M	7.57	...	...	7.64	...
N	7.70	...	...	7.64	...

Tankcars (for week ended October 30)—
K $7.27, N $7.30, 1,650*.

Sales, USDA
737* 252* 531* 820* 504*

New York
(per 100 lbs., c.l., Friday)
B through N $8.75, WW $8.90, WG $8.75.

Turpentine, Gum
(USDA, per gal., 7.2 lbs.)

Price	...	.518	...	.515	.515
Sales	...	12.000¶	...	12.000¶	6.000¶

New York, Friday, per gal., 7 lbs., tankcars, 59c., l.c.l. 70c.

*Drums equivalent. ¶Gallons. ‡Average price.

Armour Labs Manager

Edgar L. Patch has been appointed general manager of Armour Laboratories, Chicago, succeeding T. E. Hicks who resigned recently. Mr. Patch joined the laboratories in 1951 as administrative assistant. He had previously spent sixteen years with E. L. Patch Company, Stoneham, Mass.

Sumner Elects Croxall

Dr. Willard J. Croxall, director of research of the Sumner Chemical Company, New York, has been elected to its board of directors. Before joining Sumner three years ago as associate research director, Dr. Croxall was with Rohm & Haas Company, Philadelphia, as group research leader.

Devoe & Raynolds Company Feted

Devoe & Raynolds Company, New York, was honored at the twenty-first annual dinner of the Hundred Year Association of New York, held October 28 at the Waldorf-Astoria hotel. The association awarded a plaque to Devoe "in recognition of distinguished service in the City of New York for 200 years."

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GSA Tells Third-Quarter Purchases of Critical Metals

Purchases of certain critical and strategic metals and minerals which were made during the third quarter and the cumulative purchases through the end of the quarter were announced November 4 by the General Services Administration.

Under authority previously granted by congress, the agency has seven purchase programs in progress as follows:—1,500 short tons of asbestos by October 1, 1957; 1,500 short tons of beryl ore by June 30, 1957; 200,000 long tons of chrome ore and/or concentrates by June 30, 1957; 15,000,000 pounds of columbium-tantalum by December 31, 1958; 37,000,000 long tons of manganese by June 30, 1958; 25,000 short tons of mica by June 30, 1957; and 3,000,000 short tons of tungsten by July 1, 1958.

The agency said that during the third quarter it purchased thirty-five tons of No. 1 and/or No. 2 crude asbestos for a total cumulation of ninety-five tons, and twenty-one tons of No. 3 crude mica for total cumulation of 103 tons; ninety-eight tons of beryl for a total of 128 tons; 9,280 tons of chrome for a total of 37,400 tons; 701,585 pounds of columbium-tantalum for a total of 1,923,027 pounds; 978,652 tons of manganese for a total of 2,724,396 tons; 542 tons of mica for a total of 2,192 tons, and 122,153 tons of tungsten for a total of 391,465 tons.

Cottonseed Oil Repackaging Bids Are Called for by USDA

The Department of Agriculture has issued a bid invitation for the packaging of approximately 400,000 gallons of government-owned refined cottonseed oil into fully refined cooking oil for non-profit school lunch programs and other eligible outlets.

Bids must be filed by 5 p.m. November 9 with the program's operations division, fats and oils branch of the Production and Marketing Administration, Washington, D. C. The invitation calls for packaging 340,000 gallons in one-gallon tins and 60,000 gallons in five-gallon tins.

N.E. Paint Club Meets Thurs.

The New England Paint, Varnish & Lacquer Association will hold its regular monthly dinner meeting at 5:30 p.m., November 12 at the Statler hotel, Boston. The business session of the meeting will include a report by Jack Gotthardt of the Atlantic City convention of the national association. The guest speaker of the evening will be Irving T. McDonald, whose topic will be "Whose World Is It?"

Soybean Oil Export Dip

—Continued from page 4

table oils during 1953, importing countries may draw on the United States for increased supplies in the year ahead," he declared.

"If world consumption levels are to be maintained, stocks replenished, and allowances made for gains in population, much of the world surplus of fats and oils available for export should come from the United States dollar market."

Although exports of whole soybeans during July were nearly 1,000,000 bushels above the comparable period last year, Mr. Strayer pointed out that the crop reporting board of the Department of Agriculture had recently revised its estimate of the current crop downward to 259,000,000 bushels.

1952 Export Record Challenging

"With a shorter crop for domestic crushing, and sharper export competition from cottonseed oil now in government stocks and from Manchurian soybean producers, it may be difficult to match last year's export record of 42,000,000 bushels (soybean equivalent)," he said.

"However," he stated, "Japan has been a heavy importer of American soybeans in the post-war period, and should continue to be unless there is an unforeseen change in the international picture."

The European market has traditionally shown a preference for soybean oil over the hard oils, such as palm and whale oil, he said, and Germany in particular has greatly increased her imports of soybean oil since prewar days. Modern crushing facilities with considerably greater capacity have been rebuilt there since the war, Mr. Strayer said.

"Europe's growing margarine industry is likely to increase the pressure for more imports of soybeans and soybean oil," he declared, "and we are in a position to meet that demand on mutually favorable terms."

Chats about Finishes

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by

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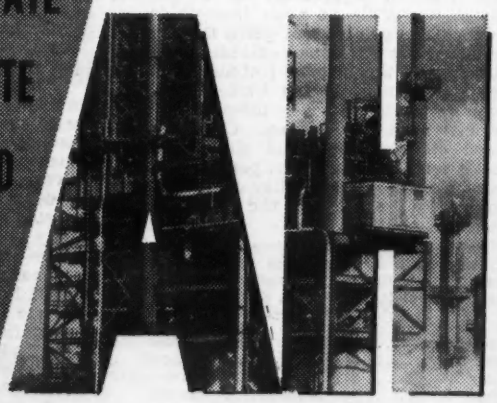

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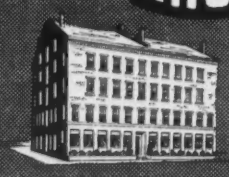

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Oils, Fats and Waxes

There was little snap to trading in oils and fats last week. Edible oils moved spasmodically, chiefly for prompt delivery. Corn was firmer, and slightly higher. Crude cottonseed oil was off slightly, while cash oil was unchanged. Crude peanut oil was scarce and firm, with quick shipment commanding a premium. Trading in soybean oil was reported of fair volume. Prices were irregular, closing unchanged and steady.

Firmness featured tallow and greases, the market advancing fractionally. Trading for export was fairly active, while domestic demand was restricted to small lots. Soapers were reported on the sidelines.

Consuming demand for tung oil was fairly active for prompt delivery, while futures received little interest. Sales were reported a scale downward, the market dropping about ½ cent per pound during the week. Trading in linseed oil was confined to less carlots quantities for immediate delivery. Consuming inquiry for futures needs continued slow. Oiticica oil was unchanged and well held at unchanged levels. Domestic castor oil was quiet, and quotably unchanged, while Brazilian oil was weak and fractionally lower.

While buying interest lagged in carnauba wax, the market remained unchanged. Holders of spot stocks maintained former quotations for all grades, and the market reflected the firmness of shipment from Brazil. Ouricury wax was stronger with higher cost of replacements. Refined on spot was lifted one cent per pound.

Vegetable Oils

Castor Dehydrated—Business was reported limited to prompt needs. Prices were without change for all grades. Brazilian No. 1 was inactive and lower at 17¼c. per pound, tankcars, New York, prompt delivery.

Coconut — Market remained steady. Crude was held at 16¾c. per pound, tankcase, f.o.b. Pacific coast, November shipment and 16½c., second half. Limited stocks of crude at New York were nominal at 18c. to 18⅛c. per pound, tankcars, prompt, and 17½c., straight December.

Copra—Shipments were steadier and unchanged. Prompt shipment was quoted at $215 per ton, c.i.f. Pacific coast.

Corn—Crude was firmer and advanced slightly. Crude was sold at 14⅜c. per pound, tankcars, f.o.b. mills. Refined was higher at 17½c. per pound, tankcars, New York delivery.

Cottonseed—Consuming demand for refined oil was light and spotty last week. Prices were unchanged at 17¾c. per pound, tankcars, New York delivery, despite an easier tone in crude oil. Bleachable cottonseed oil futures also were dull and featureless. Slight early gains were lost due to liquidation in December. There was little of news interest to influence the market and price fluctuations reflected the movement of allied markets. Reports of the sale of cottonseed oil by the government to the United Kingdom stimulated the market temporarily, but official news was lacking. Crude cottonseed oil was quiet and slightly easier. Sales took place at 13¼c. per pound, tankcars, Texas. In the Valley 13½c. was bid and 13⅝c., asked and the southeast was nominal at 13⅝c.

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended November 6 follow:—

	Sales	Cents per pound High	Low	Close
December	74	16.23	15.95	16.11S
March	54	15.97	15.68	15.86S
May	23	15.80	15.53	15.60@15.63
July	16	15.45	15.20	15.20S
September	2	14.57	14.56	14.45@14.55

Total sales, 149 contracts.

Memphis.—Crude cottonseed oil bid at 13½c. per pound, tankcars, f.o.b. mills and crude soybean oil was nominal at 13⅝c. Decatur. Market was quiet. Cottonseed meal was steady at $57 per ton, sacked Memphis. Good demand for hulls, quoted at $14.50 per ton, bulk, Valley basis.

Linseed—Moderate volume of business was reported for immediate requirements. Market tone was steadier, with the firmness of flaxseed. Raw oil was unchanged at 16c. per pound, tankcars, Minneapolis and 17.25c. New York delivery, for the balance of the year. Consumers continued to take sizable lots of oil against former contracts. Buying interest in futures continued inactive.

Minneapolis.—Only scattered replacement business was being accomplished in linseed oil, area crushers reported. There were numerous inquiries as more users began to get low on balances and were in need of replenishments. There were reports of shading on prices in an effort to spur bookings but most crushers maintained asking prices on raw linseed oil at 16c. per pound, tankcars, f.o.b., Minneapolis. Warehouse basis price was 16.2c. a pound for nearby delivery. Shipments were moderate.

Shipments of linseed oil, in pounds, were as follows:—

	1953-54	1952-53
Past week	5,460,000	7,320,000
Since Sept. 1.....	60,480,000	82,440,000

Flaxseed—Stocks of 41,000,000 bushels were stored in all positions October 1, according to the Bureau of Agricultural Economics. This quantity is one-fourth larger than the comparable totals in 1951 and 1952, but 6 to 7 percent smaller than October 1 holdings in either 1950 or 1948 and nearly one-fifth smaller than the October 1, 1949, stocks. Current stocks indicate a disappearance of 7,627,000 bushels from the supply of 49,033,000 bushels as of July 1, 1953. This supply consisted of a carry-over of 10,022,000 bushels and a new crop of 39,011,000 bushels. During the July-September quarter 6,265,000 bushels were processed for oil, according to the Bureau of the Census.

Minneapolis.—Cash flaxseed sold around $3.93 to $3.95 per bushel, delivered Minneapolis last week. Very little seed was offered for spot cash sale and bulk of the bookings were on a to-arrive basis. Purchases of seed in the spot cash market amounted to 24 cars and only 3,000 bushels in trucklots. To-arrive bookings totaled 48 cars and in excess of 133,000 bushels in varied-sized lots out of store. Receipts of flaxseed for all accounts totaled 198 cars for the week, compared to 295 cars the preceding week and 142 cars in the same week last year. Shipments from Minneapolis totaled 68 cars as against 32 cars the previous week and 55 cars a year ago.

Receipts and shipments and flaxseed, in bushels, were as follows:—

	Receipts 1953-54	Receipts 1952-53	Shipments 1953-54	Shipments 1952-53
Past week.	346,500	241,400	133,000	62,900
Since Sept. 7..	9,606,100	8,711,300	1,681,550	1,206,450

Oiticica—Trading was fairly active for prompt delivery. Liquid was unchanged and steady at 18c. to 18¼c. per pound, tankcars, New York, prompt delivery. Drums were maintained at 19½c. to 20c. per pound, according to quantity.

Palm—Higher primary markets created a firmer tone locally. Clarified oil on spot was maintained at 12½c. to 13c. per pound, as to quantity. Tankcars were firmer at 11¼c. per pound, prompt delivery, New York.

Olive—Fair volume of business was reported at $2.60 to $2.65 per gallon, drums, duty paid on the spot. Supplies here were not heavy and in firm hands.

Peanut—Offers of crude from the South were light, but demand also was inactive. Crude was sold at 20½c. per pound, tankcars, f.o.b. mills, first half November. Refined oil was quiet and nominal at 25¾c. per pound, tankcars, spot, New York, and 24¾c., December.

Rapeseed—Trading was spotty. Refined oil was well held at 16¼c. per pound, tankcars, New York, prompt delivery.

Soybean—Fairly active trading boosted the market fractionally early, but the advance was not sustained when demand dried up. Prices were unchanged and steady at the close. Crude was quoted at 13⅝c. per pound, tankcars, f.o.b. Decatur, first half November; with sales at 13⅜c., second half; at 13¼c., straight November, and 13c. December. January-March was offered at 12⅝c., same basis. Refined salad oil was unchanged and sold at 16¼c. per pound, tankcars, New York delivery.

Stocks of old soybeans in all positions on October 1, amounted to 10,997,000

For Late Market Developments, See Page 4

Price Trends

Advanced

Cottonseed meal, 50c. to $1 per ton.
Greases, ¼c. per lb.
Oil, corn, crude, ½c. per lb.
ref., ½c. per lb.
Rice bran, ½c. per lb.
Tallow, ¼c. per lb.
Wax, ouricury, ref., 1c. per lb.

Reduced

Lard, ¾c. per lb.
Linseed meal expeller, 50c. per ton.
Oil, castor No. 1, Braz., ½c. per lb.
Cottonseed, ⅛c. per lb.
Tung, ½c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 7, 1952
90.91	90.91	92.50	119.70

(For Current Prices see page 9)

Margarine Output: Sept.

Margarine production totaled 114,574,000 pounds in September compared with 96,053,000 pounds in August, according to the Census Bureau.

Production and Producers' Shipments and Stocks of Margarine

	Uncolored September	Colored September
Stocks, beginning of mo.[1]	1,447,000	12,362,000
Production	4,992,000	109,582,000
Shipments	5,003,000	108,377,000
Stocks, end of mo.[1]	1,436,000	13,567,000
Production by type of package[2]—		
One pound		
Regular (Elgin, Western, etc.)	812,000	[3]105,283,000
Bags (plastic)	536,000	.....
Bulk		
Pats or chips	.....	1,102,000
Over one pound (excluding pats and chips)	3,645,000	3,222,000

[1]Stocks held at production plants only. Total factory and warehouse stocks at the beginning and end of September were 18,372,000 pounds and 19,350,000 pounds respectively.

[2]The sum of these items does not agree with production shown above because some margarine is not packaged during the same month in which it is produced.

[3]Includes small quantity of less than one pound packages.

Production of Margarine Monthly and Annual Totals

	Uncolored	Colored
1953—9 mos. (Jan.-Sept.)	49,079,000	891,797,000
1952—9 mos. (Jan.-Sept.)	*105,147,000	*831,166,000
1952 annual production	129,726,000	1,156,249,000
1951 annual production	211,662,000	829,056,000
1950 annual production	437,402,000	499,643,000

*Revised.

bushels according to the Bureau of Agricultural Economics. The carry-over is triple the stocks a year ago and the highest October 1 total since 1944. However, because harvest was so early this season, there was more difficulty than usual in distinguishing old soybeans from new crop in storage.

Sales and prices of prime soybean oil futures on the N. Y. Produce Exchange in tankcars (60,000 pounds) for the week ended November 6 follow:—

	Sales	Cents per pound—High	Low	Close
December	27	13.10	12.70	12.91S
March	49	12.65	12.40	12.41@12.45
May	6	12.48	12.35	12.20@12.27
July	1	12.05	12.05	11.94@12.00
September	12	11.45	11.30	11.25@11.30

Total sales, 95 contracts.

Tung—Business was fairly active for prompt delivery at lower prices. Sales were reported at 24½c. per pound, tankcars, New York, for prompt and fractionally lower for later delivery. Late November and December was quoted at 23¼c. per pound, same basis. Drums were lower, 26c. to 26½c. per pound, spot as to quantity. Domestic oil was more or less nominal at 24½c. per pound, tankcars, f.o.b. mills.

Fats and Greases

Greases—Market was stronger with tallow, and all grades were lifted ¼c. per pound. Export business was fairly active, while domestic buying was limited. Choice white grease, no hog fat was nominal at 7⅞c. per pound, tankcars delivered; yellow, grease was quoted at 4¾c.; house, 4½c., and brown, 3½c., same basis.

Lard—This market was unsettled and lower. Cash lard was quoted nominally at 15¼c. per pound, tierces, Chicago.

Tallow—Steady demand for export and from dealers strengthened the market and sales took place at an advance of ¼c. per pound. Demand from soapers was inactive. Offerings were light and well held. Fancy bleachable was quoted at 6c. per pound, tankcars, delivered; extra, 5¾c.; special, 5½c. and No. 1, 4⅞c., same basis. Edible tallow was unchanged and nominal at 12½c. per pound, tankcars, delivered, New York.

Fish Oils

Refined—Less carlots were in fair request, while interest in sizable quantities continued slow. Asking prices were without change, but could have been shaded for carlots. Light pressed oil was unchanged at 11c. per pound, tankcars, New York basis. Interest in menhaden oil was reported inactive. Prices were steady at 6¾c. per pound, tankcars, f.o.b. Atlantic and Gulf coasts.

Los Angeles.—Production of Canadian herring progressed at a good level. Crude oil was offered 7c. per pound, f.o.b. Vancouver, with demand reported better than in recent weeks. One car of crude tuna oil moved from San Diego, delivered f.o.b. San Pedro, 4¾c. per pound. Five cars remain at 5c. per pound asked although possibly this could be shaded to 4⅞c.

Fatty Acids

This market remained steady for all varieties. Trading was reported fairly active for prompt delivery. Withdrawals against orders also moved in good volume. Oleic, stearic and tallow fatty acids were firm at the recent advance. While vege-

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THIS practical guidebook acquaints you with the factors bringing about the industrial waste problem, the responsibilities of the plant owner, the legal factors involved, advantages of employing a competent technician to assist in assembling essential data, and the need for cooperation between enforcing agencies, industrialist, and consulting specialist

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table acids were quotably unchanged, all grades were well held, reflecting the firmness of basic oils.

Cake and Meal

Cottonseed Meal—Demand for cottonseed meal continued light, considering this time of year. Most mills are only willing to sell meal and oil when they can get equal to or slightly better than government support prices. With slightly better oil market, some mills have been inclined to sell limited quantities of meal at slightly below the government asking price for meal. Most of the increased demand for meal in the last several days has been from the midwestern and western areas where feeding is picking up slightly. Cottonseed meal forty one percent was offered at $56 per ton sacked Memphis, $58 Alabama, Georgia, South Carolina points and $60 basis North Carolina; bulk $3 lower and 36 percent $5 less, November-December shipment.

Linseed Meal—Demand was restricted to immediate delivery. Market was easy.

Minneapolis.—Weakness continued to prevail in the linseed meal market, especially on the expeller type meal. Feed mixers bought only as needed, which accounted for the light demand. Extracted linseed meal held about steady at $57 a ton, bulk, in carlots, f.o.b., Minneapolis, while expeller meal was down 50c. a ton at $62, bulk, Minneapolis. Shipments continued excellent.

Shipments of linseed meal, in pounds, were as follows:—

	1953-54	1952-53
Past week	14,580,000	13,740,000
Since Sept. 1	110,400,000	126,060,000

Peanut Feed Meal—Supply of peanut feed meal was limited. Demand also was slow. Last week the government offered peanuts in the southeast to produce approximately 500 tons of meal. Old process 45 percent meal was offered at $65 per ton, sacked, Georgia points and solvent $62 basis Alabama points for November shipment.

Soybean Meal—Soybean meal production continued slightly in excess of demand and immediate shipment was offered at less than deferred shipments. Feeding ratios are still good, nevertheless, buyers are sticking very closely to a hand-to-mouth purchasing basis. Forty four percent was offered at $56 per ton Decatur for November shipment, with December forward quoted $2 to $3 per ton premium, and 44 percent southeastern production meal at $60 per ton bulk f.o.b. Mississippi Valley points for November through January shipment.

Waxes

Beeswax—Market was quiet, but steady. Consumers continued to operate in a hand to mouth manner. Crude and refined grades were quotably unchanged.

Carnauba — Trading was slow as consumers continued to limit purchases to small lots for fill-in needs. Stocks on spot well held at unchanged quotations and the market tone was steady, with the firmness of replacements from Brazil. No. 3 crude was quoted at 87c. to 89c. per pound and refined, 92c. to 94c. per pound, spot delivery, depending upon quantity. No. 1 yellow was unchanged at $1.19 to $1.21, per pound, same basis.

Ouricury—Increased cost of replacements was reflected in the local market and spot stocks were raised to 78c. to 80c. per pound, according to quantity. Business was light and spotty.

Federation Annual Meeting

—Continued from page 71

house paint, such as was used in recent atomic tests in Nevada, where it made an unusually good showing); (3) destructible type of film which under high heat releases a fire-fighting agent, such as paints pigmented with antimony oxide and include chlorinated paraffin in their formulation, and (4) intumescent paints which not only release a fire-fighting agent as the film is destroyed under heat, but also leave a porous cellular residue which insulates the surface from the heat source.

Zinc borate was felt to be one of the best pigments to include in the pigmentation of fire retardant paints, while alkyd resins were indicated to be among the best vehicles. The inclusion of a polyamide resin in the vehicle tends to provide a good degree of intumescence, it was stated. The washability of fire retardant paints is somewhat improved by incorporating some silicone resin.

Formulating Principles

The formulating principles of fire retardant paints was felt to be not too much different from other oleoresinous paints, provided the formulator keeps in mind that he is formulating a paint which must take into account such factors as making it as nearly incombustible as possible, release inert gases under high heat, form a cellular mat as the film is destroyed to insulate the surface, have a high reflectance value, and making it meet the needs of the surface over which it is applied. It is also important to keep the pigment volume concentration in mind, and to make as few compromises with durability as possible in obtaining good fire retardant properties.

A suitable exterior fire retardant paint vehicle was felt to be one containing approximately 72 percent linseed oil, 15 percent chlorinated paraffin of the 70 percent type and 13 percent of a combination of alkyd resin and polyamide resin. All raw materials for the manufacture of good fire retardant paints are currently available.

Use on Metal

On metal, a first coat of an anti-corrosive primer was considered necessary. This can be followed with fire retardant paint. Zinc chromate or red lead primers of high pigment volume were recommended. Where desired, metal may be finished with a first coat of anti-corrosive primer, a second coat of fire retardant paint and a third coat of alkyd enamel to give the desired type of finish. Tests made on cold rolled steel metal panels finished as above, with a coat of intumescent fire retardant paint sandwiched in between primer and alkyd resin topcoat, were compared with test panels finished only with primer and alkyd resin topcoats.

The panels were exposed to the same intensity of heat. The panels without an intumescent coating attained a temperature, determined by a thermo-couple, of 800°F. in three minutes. After twenty minutes, the panels having one coat of intumescent paint in the system attained temperatures of only 300°F. to 350°F.

Mathieson Adds Dean Bixler to Staff

Dean A. Bixler has joined the market development department of Mathieson Chemical Corporation, Baltimore, Md. He was previously employed in the Buckeye cellulose and specialties division of the Procter & Gamble Company.

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600 gal. vert. agit. Jack. Steel Kettle.
8—Jack Kettles, 50 to 2500 gals.
2—Pfaudler 500-gal. Glass Lined Tanks.
1—250 gal Lead lined Kettle.
6—American Tool 300 gal. Churns.
250 gal. Jacketed Copper Kettle.
Stainless, alum., Copper, Glass Lined, New Stainless Tanks, 50 to 5,000 gals.
250 gal. vert. Copper Jack Kettle.
Copper Varnish Kettles, 150 to 300 gals.

PULVERIZERS AND MILLS

Patterson Pebble Mills, 6'x8', 6'x5', 30"x42".
Abbe 24"x33" & 30"x36". Jar Mills.
1—Abbe Pebble Mill, 24"x33". Jar Mills.
#1 Raymond Autom. Pulverizer, 20 HP.
1#00 Raymond Mill 30 H.P., complete.
2—#0000 Raymond Mills.
Hammer Mills & Pulverizers, to 50 HP.
1—Sturtevant 42" Rock Emery Mill.
1—Robinson 16" & 22" BB Attrition Mills.
1—Lehman 4 roll WC., 12"x36" Steel Mill.
4—Lehman & Kent 3 Roll Steel Mills, 8"x22", 9"x32", 12"x30", 16"x40".
1—Monarch 9"x24" Steel Roller Mill, 3 pr. high. Also 7½x20, 4 Roll.
1—9"x24" 1 Pr. High Steel Roller Mill.
Houchin 18"x36" 4 Roll Granite Stone Mills.
2—U. S. & Premier 1½ H.P. Colloid Mills.

MIXERS, SIFTERS & SCREENS

Baker Perkins double arm Mixers, 100, 50 & 9 gals. Also single arm Mixers.
Century 40 & 80 qt. vert. 4 speed Mixer.
Tyler 3'x5' Vibratory 2 deck Screen.
Patterson 3½' dia. Stainless Conical Blender.
1—Master Drum type 1000# Blender.
10—Dry Powder Mixers, 50 to 3,000 #.
3—Day 15 & 40-gal. Pony Mixers
15—Portable Elec. Mixers, ¼ to 2 HP.
6—Lead and Paste Mixers, to 150 gals.

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Stokes #280, 4" dia. Preform Machine.
1—Stokes E Tablet Machine, ½" dia.
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Anderson RB Expeller 20 HP Motor.
Sly Dust Collector, 242 sq. ft., complete.
3—Buffalo Horiz. Vac. Pumps, 5 H.P.
5—Stokes & Colton Rotary and Single Punch Tablet Machines, ½ to 4".
4—French Oil Motor Driven Expellers
1—Stokes 2E Paste Filler, up to 5 gals.
3—Stokes and Day Powder Fillers.
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Elgin Capper, ½ H.P. Motor driven.
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2—Worth 12"x12"x12" Vac. Pumps.
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Crystallizers 26"x15', steel.
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Sweetland Filters, #5 Stainless.
Pony Mixer, 15 gal., stainless steel.
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KETTLES & REACTORS—Steel, 2800 gal., 1700 gal., 1000 gal.
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TANKS—Stainless Steel, 650 gal., 9800 gal., 10000 gal.
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Above tanks are of welded construction—have dished heads—located in Rochester, N. Y.

4—28' dia. 19'6" high, 9/16" plate, 100,000 gals., welded.
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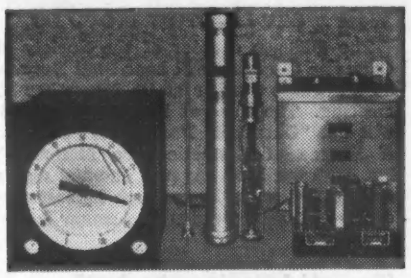

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This instrument specifically desgined for the gauging of liquid or catalyst levels.

It may be applied to give continuous level record or control levels at some pre-determined point.

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Since the gamma rays will penetrate steel vessel walls—much as hard X-rays—it eliminates the necessity of tapping the vessel wall as is normally required when using conventional measuring mechanisms.

The Gagetron operates on a principle of a receiver (Geiger Tube) being triggered by gamma rays which are liberated from a source of radium or Cobalt 60. This source, or sources, as may be required, may be located either internal or external to the vessel wall near the point or range over which control is desired.

The receiver (Pre-amplifier) is mounted outside the vessel and above the level range to be measured or controlled.

Illustration above shows the individual components that comprise a complete Gagetron assembly. Left to right: Recorder and/or controller, Radium Support Rod and Capsule, Pre-Amplifier (Geiger Tube Assembly) Amplifier and Power Supply.

* Patent No. 2,565,963, other patents pending.

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1—Read 100 Gal. Mixer, Jack. 40 HP.
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Spray Dryer—For Sale. Used, stainless, with all accessories. Approximate capacity 1,500 lbs. per hour of dry material. OPD 129.

For Sale: Reeves 6x40' Rotary Dryer Rebuilt & reconditioned—35 h.p. motor with Link Belt silent chain drive. Manley Brothers, 1050 Ogden Dunes, Gary, Indiana.

For Sale: 3-3' dia. by 50' long, Direct Heat Rotary Dryers or Rotary Coolers, made by Bonnot Co., Canton, Ohio. 5/16" plate, including carrying rolls, supporting bases, reduction gears, etc. Located Chicago. Must be sold quickly. OPD 150.

EQUIPMENT WANTED

Wanted—Send us your list of surplus or idle machinery. Interested in large capacity dry & wet Mixers. Rotary and batch Dryers, Pulverizers, all kinds of Jacketed Kettles, Distilling apparatus, Filling and Packaging Units, Stainless steel and non-corrosive Tanks and Vessels. For 36 years we have been buying from single items to complete plants. Consolidated Products Co., Inc., 13-18 Park Row, New York 38, N. Y.

Chemical Equipment wanted for defense plant work including autoclave centrifuges, dryers, filters, kettles, mixers, pulverizers and tanks. Also interested in set-up plants, now operating or idle. Give full particulars in first letter for consideration. OPD 140.

PLANTS OFFERED

Lacquer plant, available immediate sale, low price, Westchester, completely equipped, solvents, pigment grinds, etc., ready to operate, low monthly rental, two year lease available, will consider working partner, excellent small operation, fireproof building. Box 306, Croton on Hudson, N. Y.

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If you are capable of designing and managing production of a plant to produce Polyester Resins and Laminates, we have an interesting situation. Write fully, detailing experience.

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Salesman to sell Chemicals to Photo-Engraving & Industrial Firms. Write P. O. Box 706, Hoboken, N. J.

A New York firm is looking for a chemist and salesman to formulate and sell industrial finishes. Wonderful opportunity for the right man. State experience. OPD 136.

Resin Sales. Could use one more good man. Full line Urea, Phenolic Resins—Liquid or Powder types. All correspondence treated in confidence. Synvar Corporation, Wilmington, Delaware. Address reply to sales mgr, c/o P. O. Box 1768 (confidential box for this Advertisement).

Polyester Production Man. If you have experience in the fabrication of Polyester resins we can offer a partnership and/or a profit sharing arrangement in a new large scale operation without any investment by you. To qualify, a thorough know how of all phases of production with current experience in the actual fabrication and production of corregated sheets, auto bodies, etc., is required. A technical background is preferred but not essential. We will also consider a technical service man who is engaged in development work in the manufacture and use of polyester resins. Write giving details which will be held in the strictest confidence to the John Brokerage Associates Co., Rooms 303-306 400 38th Street, Union City, New Jersey.

POSITIONS WANTED

Chemical Engineer: Diverse background, experienced pilot and fine chemical production U. S. and abroad. Wide knowledge all phases pharmaceutical development and manufacture. Desire repsonsible position in small chemical or pharmaceutical firm. OPD 147.

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For Sale: An Alkylated Tertiary Phenolic Amine (o-dimethyl amine methyl p-butyl phenol) RM-77 42,000 lbs. available @ 16c./lb. drums included. Write, wire J. M. Hirsch Co., 622 Washington St., San Francisco 11, Calif.

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Sell Now! Markets declining. Confidential services offered for disposal of raw material inventories; factory output, over-production; also by-products and residues; equipment. OPD 148.

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Chicago Cosmetic Chemists Will Hear Dubrow Nov. 10

The Chicago chapter of the Society of Cosmetic Chemists will hear Paul Dubrow as the guest speaker at its November 10 meeting. The topic of Mr. Dubrow's talk will be, "Chemicals From Fats and Oils; A Source of Cosmetic Raw Materials." Mr. Dubrow is an organic chemist and a section leader in the research laboratories of the chemical division of Armour & Co., Chicago.

Tax Aid Policy Revised

—Continued from page 4

of firms outside the areas. The project was abandoned under congressional pressure, however, when it developed that quite often contracts were denied to a small supplier and awarded to his larger competitor simply because the plants of the latter were in the labor surplus area. Another proposal that has since been dropped was the allowing of price differentials for firms in labor surplus areas.

Under the latest modification of contracting policy, it is planned to have set-asides of a part of the contracts which will be available to firms in the labor surplus areas. When a contract has been formally advertised only a portion of it will be awarded to the lowest bidder outside the labor surplus area and the remainder will be set aside for negotiation with firms within the labor surplus areas. They will have to meet the prices established under the competitive bids of the firms outside these areas.

Minerals Exploration Cut

—Continued from page 3

will apply only to those applications received after November 3.

C. O. Mittendorf, administrator of DMEA, reported to Secretary McKay that during the four-month period ending October 30, only three applications had been received for the four commodities which are hereafter ineligible for government assistance, and that during the same four-month period 48 percent of all applications received were for minerals heretofore eligible for 90 percent government contribution, which under the new regulations would require the applicants to furnish 25 percent of the approved costs of their exploration projects, instead of 10 percent, as required under the former regulations.

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Lead, Zinc Tariff Rise

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added, and the industry hopes the Tariff Commission will support such a tax in its reports to the congressional committees.

Lead Figures Cited

Production figures for the past five years indicate an available mine output of lead in the United States amounting to approximately 400,000 tons a year, Mr. Herris said. Secondary production recoverable from scrap amounts to about 415,000 tons, making a total of 815,000 tons from domestic sources available for consumption. Consumption last year amounted to 1,130,000 tons, indicating a need for 315,000 tons of foreign lead, but imports amounted to 643,600 tons, or more than double our needs, he declared.

Similar conditions exist with respect to zinc, he said. Whereas only about 399,000 tons of imports are needed to supplement domestic production, imports last year amounted to 699,200 tons, or more than twice our needs. For the first eight months of this year, lead imports were 24 percent over those of the comparable period in 1952, and zinc imports ran ahead by nearly 60 percent.

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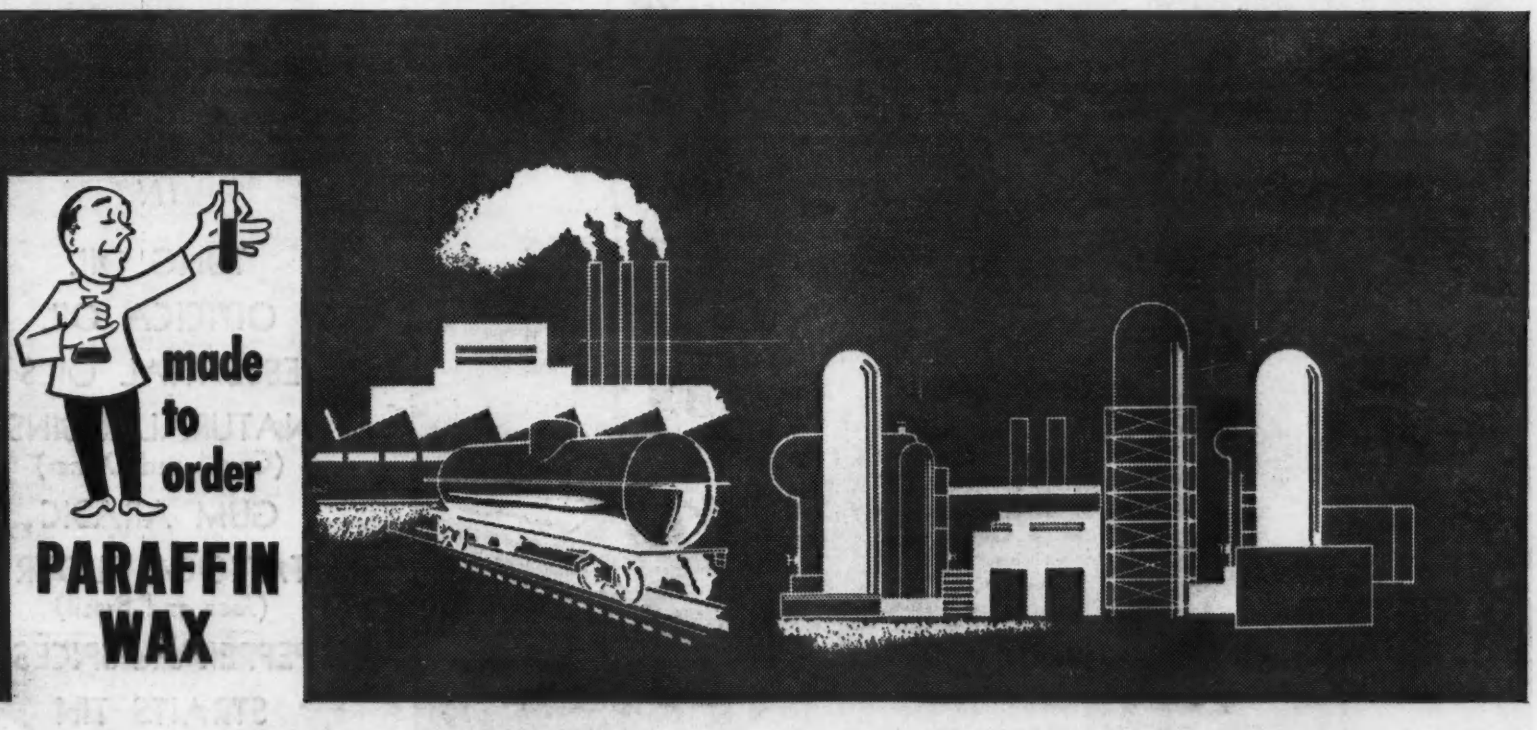

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